

# The cs-techrep Example of a Technical Report in Computer Science and Software Engineering

Technical Reports: CL-2024-42, March 2024

Christoph P. Neumann 

CyberLytics-Lab at the Department of Electrical Engineering, Media, and Computer Science  
Ostbayerische Technische Hochschule Amberg-Weiden  
Amberg, Germany

**Abstract**—Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetur id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. **{▲The abstract does neither mention a teaching module nor a team/project, it is a summary of the content of the technical report, thus, the objectives and architecture.}**

**Index Terms**—template; lorem ipsum.

## I. INTRODUCTION AND OBJECTIVES | FUNCTIONAL REQUIREMENTS | PROBLEM STATEMENT

The cs-techrep formatting is adopted both from IEEE [1] and IARIA [2] styles. The cs-techrep  $\LaTeX$  class is based on IEEEtran class [3]. In addition, be aware of the supplementary IARIA editorial rules [4] **{▲}** that provide a beginner-friendly set of further advices. It is recommended to use a grammar tool, e. g., the LanguageTool [5] browser plugin in combination with Overleaf [6].

The pipe symbol “|” in the headings represents alternatives. Choose one and remove the others. The selectively provided quoted terms are special German alternatives.

The problem statement needs to be written from perspective of a subject-matter expert (“Fachkonzept”). Like an elevator pitch / mission statement **{▲}**. NOT from a technical perspective.

## II. OPTIONAL: RELATED WORK | STATE OF THE ART | METHODS | DATA ACQUISITION

Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

## III. ARCHITECTURAL GOALS

Provides (1) a visualization of the external systems and users with which the system interacts (“Kontextabgrenzung”), (2) the most important technical and organizational preconditions (“Rahmenbedingungen”), (3) quality/non-functional

requirements (“Qualitätsziele”), and/or (4) architectural style design decisions with formative patterns of the solution (“Architekturstil”) as well as (5) the applied programming language.

## IV. ARCHITECTURE OF FANCYNAME | RESULTS | STRUCTURAL DESIGN | “BAUSTEINSICHT”

### A. Technology Stack | Overall System

Provides (1) design decisions based on the previously defined requirements and (2) a visualization of the functional structure at top level including relationships (“Grobe Zerlegung”), thus, gives an overview on modules, frameworks, and middleware.

In discussions of multi-tier architecture, layer is often used interchangeably – and mistakenly – for tier. They aren’t the same. A “layer” refers to a functional division of the software, but a “tier” refers to a functional division of the software that runs on infrastructure separate from the other divisions. The Contacts app on your phone, for example, is a three-layer application, but a single-tier application, because all three layers run on your phone.

In discussions concerning multi-tier architecture, the term “layer” is frequently misused interchangeably with “tier”, despite their distinct meanings. A layer denotes a functional partition within the software, whereas a tier signifies a functional division that operates on separate infrastructure from other divisions/tiers. For instance, the Camera app or Settings app on your phone exemplifies a three-layer application but remains a single-tier application since all three layers run on your phone.

### B. Presentation Tier | Frontend

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam

vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

### C. Application Tier | Backend | “Anwendungskern”

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetur adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

### D. Data Tier | Persistence

Fusce mauris. Vestibulum luctus nibh at lectus. Sed bibendum, nulla a faucibus semper, leo velit ultricies tellus, ac venenatis arcu wisi vel nisl. Vestibulum diam. Aliquam pellentesque, augue quis sagittis posuere, turpis lacus congue quam, in hendrerit risus eros eget felis. Maecenas eget erat in sapien mattis porttitor. Vestibulum porttitor. Nulla facilisi. Sed a turpis eu lacus commodo facilisis. Morbi fringilla, wisi in dignissim interdum, justo lectus sagittis dui, et vehicula libero dui cursus dui. Mauris tempor ligula sed lacus. Duis cursus enim ut augue. Cras ac magna. Cras nulla. Nulla egestas. Curabitur a leo. Quisque egestas wisi eget nunc. Nam feugiat lacus vel est. Curabitur consectetur.

### E. Optional: Infrastructure and Deployment | Distribution Perspective | “Verteilungssicht”

Provides (1) information about configuration, exact software versions, SBOM, DevOps, Cloud, AWS, and others. Should add (2) security-related considerations or disclaimers. Could include (3) a software bill of materials (SBOM), at least for the major libraries or frameworks.

## V. DISCUSSION | EVALUATION | LESSONS LEARNED | IMPEDIMENTS

Suspendisse vel felis. Ut lorem lorem, interdum eu, tincidunt sit amet, laoreet vitae, arcu. Aenean faucibus pede eu ante. Praesent enim elit, rutrum at, molestie non, nonummy vel, nisl. Ut lectus eros, malesuada sit amet, fermentum eu, sodales cursus, magna. Donec eu purus. Quisque vehicula, urna sed ultricies auctor, pede lorem egestas dui, et convallis elit erat sed nulla. Donec luctus. Curabitur et nunc. Aliquam dolor odio, commodo pretium, ultricies non, pharetra in, velit. Integer arcu est, nonummy in, fermentum faucibus, egestas vel, odio.

## VI. CONCLUSION AND FUTURE WORK | “FAZIT UND AUSBLICK”

Sed commodo posuere pede. Mauris ut est. Ut quis purus. Sed ac odio. Sed vehicula hendrerit sem. Duis non odio. Morbi ut dui. Sed accumsan risus eget odio. In hac habitasse platea dictumst. Pellentesque non elit. Fusce sed justo eu urna porta tincidunt. Mauris felis odio, sollicitudin sed, volutpat a, ornare ac, erat. Morbi quis dolor. Donec pellentesque, erat ac sagittis semper, nunc dui lobortis purus, quis congue purus metus ultricies tellus. Proin et quam. Class aptent taciti

sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Praesent sapien turpis, fermentum vel, eleifend faucibus, vehicula eu, lacus.

## REFERENCES

- [1] IEEE. *Conference Template and Formatting Specifications*. 2018. URL: <https://www.ieee.org/content/dam/ieee-org/ieee/web/org/conferences/Conference-template-A4.doc>.
- [2] IARIA. *Formatting Rules*. 2014. URL: <http://www.iaria.org/formatting.doc>.
- [3] Michael Shell. *How to Use the IEEEtran L<sup>A</sup>T<sub>E</sub>X Class*. 2015. URL: [http://mirrors.ctan.org/macros/latex/contrib/IEEEtran/IEEEtran\\_HOWTO.pdf](http://mirrors.ctan.org/macros/latex/contrib/IEEEtran/IEEEtran_HOWTO.pdf).
- [4] IARIA. *Editorial Rules*. 2009. URL: <https://www.iaria.org/editorialrules.html>.
- [5] LanguageTool GmbH. *LanguageTool*. URL: <https://languagetool.org/overleaf>.
- [6] Digital Science UK Limited. *Overleaf*. URL: <https://www.overleaf.com>.
- [7] Philipp Stangl and Christoph P. Neumann. “FoodFresh: Multi-Chain Design for an Inter-Institutional Food Supply Chain Network”. In: *Proc of the 14th International Conference on Cloud Computing, GRIDs, and Virtualization (Cloud Computing 2023)*. Nice, France, June 2023, pp. 41–46. DOI: 10.48550/arXiv.2310.19461.
- [8] Christoph P. Neumann and Richard Lenz. “Distributed Ad Hoc Cooperation in Healthcare”. In: *Post-Proceedings of the Joint Int’l Workshops on Process-oriented Information Systems in Healthcare and Knowledge Representation for Healthcare (ProHealth’12 / KR4HC’12) in conjunction with the 10th Int’l Conf on Business Process Management (BPM’12)*. Part of the Lecture Notes in Computer Science book series (LNCS, volume 7738). Springer, 2013, pp. 113–125. DOI: 10.1007/978-3-642-36438-9\_8.
- [9] Christoph P. Neumann. “Verteiltes Dokumenten-orientiertes Prozessmanagement im Gesundheitswesen”. In: *Ausgewählte Informatikdissertationen 2012*. Ed. by Abraham Bernstein, Wolfgang Effelsberg, Steffen Hölldobler, Hans-Peter Lenhof, Klaus-Peter Löhner, Paul Molitor, Gustaf Neumann, Rüdiger Reischuk, Nicole Schweikardt, Myra Spiliopoulou, Harald Störrle, and Sabine Süssstrunk. Vol. D-13. LNI. GI, 2012, pp. 241–250. URL: <https://dl.gi.de/20.500.12116/33740>.
- [10] Christoph P. Neumann and Richard Lenz. “The alpha-Flow Approach to Inter-Institutional Process Support in Healthcare”. In: *International Journal of Knowledge-Based Organizations (IJKBO) 2.4 (2012)*, pp. 52–68. DOI: 10.4018/ijkbo.2012100104.
- [11] Christoph P. Neumann, Scott A. Hady, and Richard Lenz. “Hydra Version Control System (Poster)”. In: *Proc of the 10th IEEE Int’l Symposium on Parallel and Distributed Processing with Applications (ISPA-12)*. Madrid, Spain, July 2012, pp. 837–838. DOI: 10.1109/ISPA.2012.124.
- [12] Christoph P. Neumann, Andreas M. Wahl, and Richard Lenz. “Adaptive Version Clocks and the OffSync Protocol (Poster)”. In: *Proc of the 10th IEEE Int’l Symposium on Parallel and Distributed Processing with Applications (ISPA-12)*. Madrid, Spain, July 2012, pp. 835–836. DOI: 10.1109/ISPA.2012.123.
- [13] Christoph P. Neumann, Peter K. Schwab, Andreas M. Wahl, and Richard Lenz. “alpha-Adaptive: Evolutionary Workflow Metadata in Distributed Document-Oriented Process Management”. In: *Proc of the 4th Int’l Workshop on Process-oriented Information Systems in Healthcare (ProHealth’11) in conjunction with the 9th Int’l Conf on Business Process Management (BPM’11)*. Clermont-Ferrand, FR, Aug. 2011, pp. 225–236. DOI: 10.1007/978-3-642-28115-0\_22.

- [14] Christoph P. Neumann, Thomas Fischer, and Richard Lenz. "OXDBS – Extension of a native XML Database System with Validation by Consistency Checking of OWL-DL Ontologies". In: *Proc of the 14th International Database Engineering & Applications Symposium (IDEAS'10)*. Montreal, QC, CA, Aug. 2010, pp. 143–148. DOI: 10.1145/1866480.1866502.
- [15] Christoph P. Neumann and Richard Lenz. "The alpha-Flow Use-Case of Breast Cancer Treatment – Modeling Inter-Institutional Healthcare Workflows by Active Documents". In: *Proc of the 19th Int'l Workshops on Enabling Technologies: Infrastructures for Collaborative Enterprises (WETICE 2010)*. Larissa, GR, June 2010, pp. 12–22. DOI: 10.1109/WETICE.2010.8.
- [16] Christoph P. Neumann and Richard Lenz. "alpha-Flow: A Document-based Approach to Inter-Institutional Process Support in Healthcare". In: *Proc of the 3rd Int'l Workshop on Process-oriented Information Systems in Healthcare (ProHealth'09) in conjunction with the 7th Int'l Conf on Business Process Management (BPM'09)*. Ulm, DE, Sept. 2009, pp. 569–580. DOI: 10.1007/978-3-642-12186-9\_55.
- [17] Christoph P. Neumann and Richard Lenz. "A Light-Weight System Extension Supporting Document-based Processes in Healthcare". In: *Proc of the 3rd Int'l Workshop on Process-oriented Information Systems in Healthcare (ProHealth'09) in conjunction with the 7th Int'l Conf on Business Process Management (BPM'09)*. Ulm, DE, Sept. 2009, pp. 557–568. DOI: 10.1007/978-3-642-12186-9\_54.
- [18] Christoph P. Neumann, Stefan Hanisch, Bernhard Schiemann, and Richard Lenz. "OXDBS – Erweiterung einer nativen XML-Datenbank um die Validierung und Konsistenzprüfung gegen eine OWL-Ontologie". In: *Tagungsband der 54. GMDS-Jahrestagung*. Deutsche Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie (GMDS). Essen, DE, Sept. 2009. DOI: 10.3205/09GMDS271.
- [19] Christoph P. Neumann, Florian Wagner, and Richard Lenz. "XdsRig – Eine Open-Source IHE XDS Testumgebung". In: *Tagungsband der 54. GMDS-Jahrestagung*. Deutsche Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie (GMDS). Essen, DE, Sept. 2009. DOI: 10.3205/09GMDS276.
- [20] Christoph P. Neumann, Florian Rampp, Michael Daum, and Richard Lenz. "A Mediated Publish-Subscribe System for Inter-Institutional Process Support in Healthcare". In: *Proc of the 3rd ACM Int'l Conf on Distributed Event-Based Systems (DEBS 2009)*. Nashville, TN, USA, July 2009, 14:1–14:4. DOI: 10.1145/1619258.1619277.
- [21] Patrick Levi and Christoph P. Neumann. "Vocabulary Attack to Hijack Large Language Model Applications". In: *Proc of the 15th International Conference on Cloud Computing, GRIDs, and Virtualization (Cloud Computing 2024)*. accepted for publication. Venice, Italy, Apr. 2024. DOI: 10.48550/arXiv.2404.02637.
- [22] Amir Pakmehr, Andreas Aßmuth, Christoph P. Neumann, and Gerald Pirkl. "Security Challenges for Cloud or Fog Computing-Based AI Applications". In: *Proc of the 14th International Conference on Cloud Computing, GRIDs, and Virtualization (Cloud Computing 2023)*. Nice, France, June 2023, pp. 21–29. DOI: 10.48550/arXiv.2310.19459.
- [23] Andreas M. Wahl and Christoph P. Neumann. "alpha-OffSync: An Offline-Capable Synchronization Approach for Distributed Document-Oriented Process Management in Healthcare (Poster)". In: *Lecture Notes in Informatics (LNI) Seminars 11/Informatiktage 2012*. Ed. by Ludger Porada. Gesellschaft für Informatik e.V. (GI). Mar. 2012, pp. 131–134. ISBN: 978-3-88579-444-8.
- [24] Aneliya Todorova and Christoph P. Neumann. "alpha-Props: A Rule-Based Approach to 'Active Properties' for Document-Oriented Process Support in Inter-Institutional Environments (Poster)". In: *Lecture Notes in Informatics (LNI) Seminars 10/Informatiktage 2011*. Ed. by Ludger Porada. Gesellschaft für Informatik e.V. (GI). Mar. 2011, pp. 131–134. ISBN: 978-3-88579-444-8.
- [25] Thomas Fischer, Michael Daum, Florian Irmert, Christoph P. Neumann, and Richard Lenz. "Exploitation of Event-Semantics for Distributed Publish/Subscribe Systems in Massively Multiuser Virtual Environments". In: *Proc of the 14th Int'l Database Engineering & Applications Symposium (IDEAS'10)*. Montreal, QC, CA, Aug. 2010, pp. 90–97. DOI: 10.1145/1866480.1866494.
- [26] Holger von Jouanne-Diedrich, Juliane Blechinger, Christoph P. Neumann, Stefan Schwarz, and Richard Lenz. "Integration verteilter und heterogener Configuration-Management-Datenbanken". In: *Informatik-Spektrum* 33 (4 2010). Ed. by Arndt Bode, pp. 351–362. ISSN: 0170-6012. DOI: 10.1007/s00287-009-0398-6.
- [27] Florian Irmert, Frank Lauterwald, Christoph P. Neumann, Michael Daum, Richard Lenz, and Klaus Meyer-Wegener. "Semantics of a Runtime Adaptable Transaction Manager". In: *Proc of the 13th Int'l Database Engineering & Applications Symposium (IDEAS'09)*. Cetraro, IT, Sept. 2009, pp. 88–96. DOI: 10.1145/1620432.1620442.
- [28] Florian Irmert, Christoph P. Neumann, Michael Daum, Niko Pollner, and Klaus Meyer-Wegener. "Technische Grundlagen für eine laufzeitadaptierbare Transaktionsverwaltung". In: *Tagungsband der 13. Fachtagung Datenbanksysteme für Business, Technologie und Web (BTW'09)*. Münster, DE: Gesellschaft für Informatik e.V. (GI), Köln, Germany, Mar. 2009, pp. 227–236. DOI: 10.1145/1620432.1620442. URL: <https://dl.gi.de/20.500.12116/20447>.
- [29] Marcus Meyerhöfer and Christoph Neumann. "TestEJB – A Measurement Framework for EJBs". In: *Proc of the 7th Int'l Symposium on Component-Based Software Engineering (CBSE'04) in conjunction with the 26th Int'l Conf on Software Engineering (ICSE'04)*. Vol. 3054. Lecture Notes in Computer Science. Edinburgh, UK: Springer, Berlin, DE, May 2004, pp. 294–301. DOI: 10.1007/978-3-540-24774-6\_26.
- [30] Christoph P. Neumann. *Distributed Case Handling*. München: Verlag Dr. Hut, 2013. ISBN: 9783843909198.
- [31] Christoph P. Neumann. "Distributed Document-Oriented Process Management in Healthcare". PhD thesis. Erlangen: Friedrich-Alexander-Universität Erlangen-Nürnberg, Nov. 2012. DOI: 10.13140/RG.2.2.14719.79521. URL: <https://nbn-resolving.org/urn:nbn:de:bvb:29-opus-39070>.
- [32] Christoph P. Neumann. "Design of an Open Framework for Optimizing the Distribution of Hardware and Software Components in Control Networks for Vehicles". Diplomarbeit. Friedrich-Alexander-Universität Erlangen-Nürnberg, June 2005.
- [33] Christoph P. Neumann. "Conceptual Design and Realization of a 'Component Test Stand' for Measurements on Enterprise JavaBeans". Studienarbeit. Friedrich-Alexander-Universität Erlangen-Nürnberg, Feb. 2004.
- [34] Patrick Sabau and Christoph P. Neumann. *Analyse von Methoden zur Sicherung der Vertraulichkeit in Neuronalen Netzen*. Forschungsbericht 2024. Ostbayerische Technische Hochschule Amberg-Weiden, Mar. 2024. DOI: 10.13140/RG.2.2.21052.65924.
- [35] Paul Brandl, Manuel Kalla, Dominik Panzer, Kevin Paulus, Manuel Pickl, Franziska Rubenbauer, Berkay Yurdaguel, and Christoph P. Neumann. *Neunerln: Eine MEVN-basierte Webanwendung zum kompetitiven Kartenspielen*. Tech. rep. CL-2023-11. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2023. DOI: 10.13140/RG.2.2.33933.31209.
- [36] André Kestler, Antonio Vidos, Marcus Haberl, Tobias Dobmeier, Tobias Lettner, Tobias Weiß, and Christoph P. Neumann.

- Computer Vision Pipeline: Eine React- und Flask-basierte Webanwendung zur No-Code-Bildverarbeitung mit Cloud-Deployment.* Tech. rep. CL-2023-08. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2023. DOI: 10.13140/RG.2.2.23866.98248.
- [37] Jakob Götz, Uwe Kölbl, Maximilian Schlosser, Oliver Schmidts, Jan Schuster, Philipp Seufert, Fabian Wagner, and Christoph P. Neumann. *Nautical Nonsense: Eine Phaser3- und FastAPI-basierte Webanwendung für Schiffe-Versenken mit Cloud-Deployment.* Tech. rep. CL-2023-07. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2023. DOI: 10.13140/RG.2.2.17156.09601.
- [38] Lukas Feil, Stefan Reger, Timon Spichtinger, Manuel Pickl, Gian Piero Cecchetti, Alexander Hammer, Berkay Yurdagül, and Christoph P. Neumann. *Torpedo Tactics: Eine MEVN-basierte Webanwendung für Schiffe-Versenken mit Cloud-Deployment.* Tech. rep. CL-2023-06. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2023. DOI: 10.13140/RG.2.2.22608.69120.
- [39] Rebecca Kietzer, Baran Baygin, Carl Küschall, Jonathan Okorfor, Luca Käsmann, Michael Zimmel, Michael Ippisch, and Christoph P. Neumann. *Stockbird: Eine React-basierte Webanwendung mit serverless Cloud-Deployment zur Analyse des Einfluss von Tweets auf Aktienkurs-Schwankungen.* Tech. rep. CL-2023-04. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2023. DOI: 10.13140/RG.2.2.32675.02083.
- [40] Christian Rute, Alex Müller, Alexander Rudolf Wittmann, Arthur Zimmermann, David Nestmeyer, Julian Tischlak, Matthias Wolfinger, and Christoph P. Neumann. *FancyChess: Eine Next.js-basierte Cloud-Anwendung zum Schachspielen.* Tech. rep. CL-2023-03. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2023. DOI: 10.13140/RG.2.2.19253.24802.
- [41] Anastasia Chernysheva, Jakob Götz, Ardian Imeraj, Patrice Korinth, Philipp Stangl, and Christoph P. Neumann. *SGDb Semantic Video Game Database: Svelte- und Ontotext-basierte Webanwendung mit einer Graphen-Suche für Videospiele.* Tech. rep. CL-2023-02. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, Mar. 2023. DOI: 10.13140/RG.2.2.11272.60160.
- [42] Johannes Horst, Manuel Zimmermann, Patrick Sabau, Saniye Ogul, Stefan Ries, Tobias Schotter, and Christoph P. Neumann. *OPCUA-Netzwerk: Angular- und FastAPI-basierte Entwicklung eines OPC-UA Sensor-Netzwerks für den Heimbereich.* Tech. rep. CL-2023-01. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, Mar. 2023. DOI: 10.13140/RG.2.2.22177.79209.
- [43] Alexander Ziebell, Anja Stricker, Annika Stadelmann, Leo Schurrer, Philip Bartmann, Ronja Bäumel, Ulrich Stark, and Christoph P. Neumann. *Wo ist mein Geld: Eine MERN-basierte Webanwendung für gemeinsame Ausgaben mit Freunden oder Kollegen.* Tech. rep. CL-2022-11. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2022. DOI: 10.13140/RG.2.2.28888.67847.
- [44] Bastian Hahn, Martin Kleber, Andreas Klier, Lukas Kreussel, Felix Paris, Andreas Ziegler, and Christoph P. Neumann. *Twitter-Dash: React- und .NET-basierte Trend- und Sentiment-Analysen.* Tech. rep. CL-2022-07. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2022. DOI: 10.13140/RG.2.2.15466.90564.
- [45] Tobias Bauer, Fabian Beer, Daniel Holl, Ardian Imeraj, Konrad Schweiger, Philipp Stangl, Wolfgang Weigl, and Christoph P. Neumann. *Reddiment: Eine SvelteKit- und ElasticSearch-basierte Reddit Sentiment-Analyse.* Tech. rep. CL-2022-06. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2022. DOI: 10.13140/RG.2.2.32244.12161.
- [46] Florian Bösl, Helge Kohl, Anastasia Chernysheva, Patrice Korinth, Philipp Porsch, and Christoph P. Neumann. *Explosion Guy: Cloud-basiertes Matchmaking für einen graphischen Bombenspaß.* Tech. rep. CL-2022-05. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2022. DOI: 10.13140/RG.2.2.18822.34882.
- [47] Dominik Smrekar, Johannes Horst, Patrick Sabau, Saniye Ogul, Tobias Schotter, and Christoph P. Neumann. *OTH-Wiki: Ein Angular- und FastAPI-basiertes Wiki für Studierende.* Tech. rep. CL-2022-04. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2022. DOI: 10.13140/RG.2.2.25533.23526.
- [48] Johannes Halbritter, Helge Kohl, Lukas Kreussel, Stephan Prettner, Andreas Ziegler, and Christoph P. Neumann. *Graphvivo: Eine Graphdatenbank-Webanwendung für integrierte Datensätze von Streaminganbietern.* Tech. rep. CL-2022-01. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, Mar. 2022. DOI: 10.13140/RG.2.2.12111.46244.
- [49] Tobias Bauer, Albert Hahn, Lukas Kleinlein, Nicolas Proske, Leonard Wöllmer, Andrei Trukhin, and Christoph P. Neumann. *Covidash: Eine MEAN-Variation-basierte Webanwendung für Inzidenz-Zahlen und Impffortschritt in Deutschland.* Tech. rep. CL-2021-06. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2021. DOI: 10.13140/RG.2.2.33921.84321.
- [50] Cameron Barbee, Tim Hoffmann, Christian Piffel, Tobias Schotter, Sebastian Schuscha, Philipp Stangl, Thomas Stangl, and Christoph P. Neumann. *FireForceDefense: Graphisches Tower-Defense-Spiel mit Kubernetes-Deployment.* Tech. rep. CL-2021-05. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2021. DOI: 10.13140/RG.2.2.20500.07048.
- [51] Egidia Cenko, Madina Kamalova, Matthias Schön, Christoph Schuster, Andrei Trukhin, and Christoph P. Neumann. *Med-Planner: Eine Angular- und Django-basierte Webanwendung um ärztliche Termine übersichtlich zu verwalten.* Tech. rep. CL-2021-04. Ostbayerische Technische Hochschule Amberg-Weiden, CyberLytics-Lab an der Fakultät Elektrotechnik, Medien und Informatik, July 2021. DOI: 10.13140/RG.2.2.19409.71528.
- [52] Christoph P. Neumann, Florian Rampp, and Richard Lenz. *DEUS: Distributed Electronic Patient File Update System.* Tech. rep. CS-2012-02. Friedrich-Alexander-Universität Erlangen-Nürnberg, Dept. of Computer Science, Mar. 2012. DOI: 10.13140/RG.2.2.18075.23848.
- [53] Frank Lauterwald, Christoph P. Neumann, Richard Lenz, Anselm G. Jünemann, Christian Y. Mardin, Klaus Meyer-Wegener, and Folkert K. Horn. *The Erlangen Glaucoma Registry: a Scientific Database for Longitudinal Analysis of Glaucoma.* Technical Reports CS-2011-02. Friedrich-Alexander-Universität Erlangen-Nürnberg, Dept. of Computer Science, Dec. 2011. DOI: 10.13140/RG.2.2.31497.01128.