Mikhail Smolin

Mercedes-Benz Group AG 70565 Stuttgart Germany

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Professional Experience

04/2020 - Lead Software Architect, full-time, IT Communication & Legal

Present Mercedes-Benz Group AG, Stuttgart, Germany

- Technical leadership and execution of full lifecycle digitization and automation IT projects.
- Vendor management to ensure adherence to budget, schedule, and overarching IT strategy.
- Responsible for understanding business requirements and providing solution architectures.
- Benchmarking and identification of tech innovations for internal and external stakeholders.
- Further development of the Integrity & Legal IT landscape in the Mercedes-Benz Group.
- Support security and compliance processes along with legal requirements at headquarters.

07/2019 - Senior IT Architect, full-time, Powertrain Production & Data Analytics 03/2020 Daimler AG, Stuttgart, Germany

- Lead digital transformation efforts throughout the larger Daimler AG powertrain landscape.
- Analyzed processes and requirements with international cross-departmental professionals.
- Collaborated with IT teams in production plants to help and define the user experience.
- Approved implementations, supported and coordinated developers and external partners.
- Support of IT in international locations, especially within the scope of piloting new APIs.
- Participated in various work packages of complex cross-plant strategic Daimler IT projects.

02/2017 - **Software Engineer**, full-time, UI & Web Solutions

06/2019 EXXETA AG, Stuttgart, Germany

- Full stack web and mobile development for major automotive OEMs and Tier 1 suppliers.
- Lead an international distributed workforce according to Scrum in an agile project setup.
- Interpersonal communication in cross-cultural project teams spanning different time zones.
- Planned, directed and coordinated all aspects of project activities within the work team.
- Managed personnel and budget issues, including tracking and reporting to stakeholders.
- Collaborated with external service providers to develop long-term strategic partnerships.

Education

09/2023 - **Doctor of Philosophy**, Computer Science

Present Kyrgyz State Technical University, Bishkek, Kyrgyzstan

- Research in the field of machine learning, cybersecurity, and intrusion detection systems.
- Proposing a novel ensemble deep neural network learning model for intrusion detection.
- Implementation and empirical analysis of models with respect to real network traffic data.
- Publication of findings and insights in internationally leading conferences and journals.
- Mentoring of graduate students and assistance in course preparation and implementation.
- Contributing to the academic environment by participating in seminars and conferences.

03/2014 - Master of Science, Computer Science and Media, Ø1.3

01/2017 Stuttgart Media University, Stuttgart, Germany

- Thesis (Ø1.0): »Anomaly-based intrusion detection for automotive networks«
- I proposed the applicability of detecting cyberattacks on the vehicular CAN bus standard.
- Using network recordings of a modern sedan, a neural network was trained and evaluated.
- Courses: Machine learning, information privacy, secure systems, agile project management.

09/2015 - Master of Science, Advanced Computer Systems Development, Erasmus Grant

02/2016 University of the West of Scotland, Glasgow, Scotland

- I attended courses in data mining, cybersecurity, signal processing, and English proficiency.
- Implementation of an Android car diagnostic tool from in-vehicle sensor data using Java.
- Project: Mobile car diagnostics and performance application from OBD-II sensor data in the vehicle.
- 10/2010 Bachelor of Science, Business Informatics, $\varnothing 2.3$
 - 02/2014 Ansbach University of Applied Sciences, Ansbach, Germany
 - Thesis (Ø1.0): »Version verification of HIL test sequences in car ECU manufacturing«
 - In cooperation with Robert Bosch GmbH (Bosch Automotive Electronics), I developed a group-wide Java desktop application in order to provide mechanical and software engineers a tool for analyzing and verifying automotive electronic stability program test sequences.
 - Courses: Business economics and management, big data, software engineering, IT security.

Publications

[1] M. Smolin, "GenCoder: A Generative Al-based Adaptive Intra-Vehicle Intrusion Detection System," IEEE, vol. 12, pp. 150651-150663, 2024. e-ISSN: 2169-3536, DOI: https://doi.org/10.1109/ACCESS.2024.3476177.

Languages

German CEFR C2 Native Speaker

English CEFR C1 Advanced

Russian CEFR B1 Intermediate Beginner

Mandarin CEFR A1.1

Computer skills

Programming Matlab, Python Web HTML5, JavaScript, XML

Database MySQL, PostgreSQL IDE PyCharm, VS Code

Environment MS 365, DevOps, Jira, LATEX OS Linux, macOS, Windows

Extra

International driving permit

Stuttgart, May 16, 2025, Mikhail Smolin

M. Smolin