Mikhail Smolin

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Professional Experience

04/2020 - Present | **Lead Software Architect**, *full-time*, IT Communication & Legal
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 - 03/2020 | **Senior IT Architect**, *full-time*, Powertrain Production & Data Analytics
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 - 06/2019 | **Software Engineer**, *full-time*, UI & Web Solutions
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 - Present | **Doctor of Philosophy**, *Computer Science*
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 - 01/2017	**Master of Science**, *Computer Science and Media*, ⌀1.3 Stuttgart Media University, Stuttgart, Germany • Thesis (⌀1.0): »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 - 02/2016	**Master of Science**, *Advanced Computer Systems Development*, Erasmus Grant 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 - 02/2014	**Bachelor of Science**, *Business Informatics*, ⌀2.3 Ansbach University of Applied Sciences, Ansbach, Germany • Thesis (⌀1.0): »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 AI-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`.

[2] M. Smolin, "GenCoder++: A Protocol-Aware and Adversarially Robust Adaptive Intrusion Detection Framework for Hybrid CAN-Ethernet Vehicular Networks," *IEEE*, vol. 13, pp. 138381–138399, 2025. e-ISSN: 2169-3536, DOI: `https://doi.org/10.1109/ACCESS.2025.3595879`.

Languages

German	CEFR C2	*Native Speaker*
English	CEFR C1	*Advanced*
Russian	CEFR B1	*Intermediate*

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, August 27, 2025, Mikhail Smolin