

Nicholas F. Ebert

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WORK EXPERIENCE

Mercedes Benz Research and Development North America

2020 – Present

Senior Software and Data Engineer

Mercedes Benz Mobile App

- Led backend engineering to enable vehicle service appointment scheduling in Mercedes Benz mobile app
- Directed feature development with stakeholders, mobile app development team, and UX design to deliver service scheduling feature to nearly 1 million app users driving over 3 thousand new service appointments monthly

Data Platform

- Architected multitenant Kafka platform supporting all telemetry and real time analytics for over 32 million vehicles worldwide
- Designed high volume ETL pipelines for internal data teams, leveraging Apache Flink SQL to enrich data with generative text from large language models (LLMs) and supporting machine learning use cases
- Spearheaded development of infrastructure automation for data teams using infrastructure as code, maintaining strict data privacy in a multi-tenant environment
- Led development of data discovery customer web interface, reducing silos within the company and enabling teams to securely request access to data

In Car Applications

- Built and maintained remote app delivery platform including Spotify, Netflix, Tiktok, Tidal, etc. to 5 million vehicles worldwide
- Designed and built UI and CLI for internal app developer experience including backend authorization service in Javascript and Golang

EDUCATION

Purdue University

2016 – 2020

Computer Engineering

- CPU Design and Architecture - Designed and implemented a multicore CPU with a coherent cache and pipeline in SystemVerilog running on FPGA
- Operating Systems - Implemented an operating system from scratch in C, including lock/mutex system, memory allocation (malloc), message passing, etc.
- Compilers - Built simple compiler from scratch in C++ with abstract syntax tree, intermediate representation, bison parser

SKILLS

Azure / AWS	Apache Flink	Data Modeling	ML Operations	Java, Python, Go
Apache Kafka	SQL Database	Distributed Systems	CI/CD Pipelines	Kubernetes

PROJECTS

- Built AI capable of playing Super Mario Bros. levels, trained using reinforcement learning
- Built Tiktok clone using decentralized ATProtocol (used by Bluesky) for serving vertical video