

# Daniel Portnov

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## EDUCATION

### Georgia Institute of Technology

*Master of Science in Computer Science, Specialization in Machine Learning*

Atlanta, GA (Remote)

*Sept. 2023 – Present*

### University of Wisconsin-Madison

*Bachelor of Science in Computer Science, Minor in Mathematics*

Madison, WI

*Sept. 2018 – May 2021*

## EXPERIENCE

### AI/ML Engineer

*General Motors*

Feb. 2023 – Aug. 2024

*Warren, MI*

- Refined production-grade transformer model for lane detection, optimizing input data and evaluating outputs to enhance autonomous vehicle vision systems
- Developed time series interpolation algorithm with PySpark, standardizing data intervals and increasing analysis efficiency by 80%
- Implemented a tailored data loading system utilizing PyTorch for Delta Tables, which enabled faster data ingestion and reduced loading times by 50%, supporting robust model training without delays
- Reorganized data from parquet files into Databricks Delta Tables to enhance accessibility for model training

### Automated Driving Software Engineer

*General Motors*

Aug. 2022 – Feb. 2023

*Warren, MI*

- Wrote Python code to detect data corruption, preserving critical information and saving \$500,000+ in wasted data
- Refactored legacy codebase using clean code practices and modern Python techniques, improving readability
- Worked with teams in the Middle East to ensure that the data annotation tools they were creating met the requirements of the USA data collection team

### AV System Safety Engineer

*General Motors*

Feb. 2022 – Aug. 2022

*Warren, MI*

- Expanded unit test coverage for autonomous vehicle systems from 45% to 95%, enhancing software reliability and reducing critical bugs
- Reduced new hire on-boarding time from 1 week to 1 day by creating a Docker container with a pre-loaded development environment, ensuring a consistent setup across all machines
- Contributed to safety-focused discussions for the Cruise Origin self-driving taxi, ensuring engineering decisions prioritized passenger and pedestrian safety

### Embedded Software Engineer

*General Motors*

June 2021 – Feb. 2022

*Warren, MI*

- Designed a client-server model for vehicle-to-OTA server communication, ensuring secure and efficient software update transfers

## PROJECTS

### schnack.ai | *Python*

July 2024 – Present

- Developing a restaurant ordering chatbot using LangChain
- Implementing deterministic response generation to ensure consistent order processing
- Iterating on best interface layouts to maximize user experience

## TECHNICAL SKILLS

**Languages:** Python, Java, JavaScript, SQL, C/C++

**AI/ML:** LLMs, RAGs, Deep Learning, Reinforcement Learning

**Automotive:** ADAS, Radar, LiDAR

**Cloud & DevOps:** Docker

**Developer Tools:** Git, Linux, Conda, VS Code, Jira, Confluence

**Data Management:** Databricks, PySpark

**Libraries:** PyTorch, Pandas, NumPy, Matplotlib, Scikit-learn