Matan Shemesh - Software Engineer

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SUMMARY

- **Software Engineer with 3 years of experience** in system-level development, simulation, **infrastructure**, and process **automation** - delivering reliable software and impactful solutions, leveraging real-world **LLM** integrations.
- **Building scalable systems** and robust architecture in Linux environments using **Python (including NumPy and Pandas), C++,** Java, Bash, and working with both **SQL** and **NoSQL** databases such as **PostgreSQL** and **MongoDB**.
- **Integrating on-prem and cloud systems** using **AWS services**, **REST APIs** and **Kubernetes** to build scalable architectures.
- **Developing CI/CD pipelines** with **Jenkins, GitHub Actions**, while gaining hands-on experience with **Docker**, **Git** workflows, and secure automation practices.
- **Achieving reliable system behavior** by automating testing, validating integration, and applying robust design practices.
- Thriving in **dynamic environments**, communicating effectively, and taking full ownership from idea to production while **collaborating in teams.**

EXPERIENCE

General Motors - Simulation Team, Autonomous Vehicles:

Software Engineer | 2023 - Present:
- **Designing and developing software systems** in **Python** and **C++** within a **Linux-based environment**, leveraging **OOP** and design patterns to ensure alignment with product goals and engineering best practices.
- **Implementing infrastructure modules** to optimize functionality and ensure compatibility with autonomous platforms.
- Designing and implementing internal development platforms and integrating on-premise simulation systems with cloud-based services to enable scalable, data-driven software delivery.
- **Leading CI/CD automation** and release pipelines to improve code quality, system stability, and deployment speed.
- Developing and validating simulation software using HIL/SIL and real-vehicle setups, ensuring MCU/SOC synchronization.
- Debugging production code and enhancing the reliability of **sensor-driven systems**.

Ruppin Academic Center - Research, Smart Transportation Systems**:**

Researcher | 2025 - Present:
- **Building LLM models for traffic prediction** and route optimization, using real-time and historical data pipelines.
- **Improving ETA accuracy** in navigation systems by **combining learned traffic patterns** with algorithmic planning.

EDUCATION

BSc in Computer Engineering (CE) from Ruppin Academic Center.
- Developing a **final project: Truth Keeper** - an AI-based fake news detection system, in collaboration with IMT Lucca Italy, presented during a research visit. Participating in the Springboard for Entrepreneurship, pitching and presenting a POC to industry experts.
- Member of the **Student Council**.

MILITARY SERVICE

Serving as a **Military Officer** and Combat Commander in a **Search and Rescue unit**, with additional roles in Operations, Safety, and Reviews Officer.

VOLUNTEERING

AchraiTech 8200 - Mentor and tech judge in a youth tech empowerment program by the 8200 Alumni Association.

LANGUAGE

English - Fluent.   **Hebrew -** Native speaker.