

Autrin Hakimi

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PROFESSIONAL PROFILE

Software engineer with production experience building automation platforms, full-stack applications, and ML-driven systems. Currently developing real-time control software, internal tooling (JavaScript/Flask), and ML inspection systems at ASM America for semiconductor manufacturing. Published researcher (ACM SIGSPATIAL 2025) experienced in distributed systems, Python, C/C++, Java, and cloud infrastructure. Strong cross-functional collaborator with end-to-end project ownership from design through production deployment.

TECHNICAL SKILLS

Languages	Python, C/C++, Java, JavaScript, TypeScript, SQL, Bash, HTML, CSS, C# (.NET)
Web & Backend	React, Python Flask, Tkinter, Node.js, REST APIs, Android, JDBC, WebSockets
Cloud & DevOps	Docker, Git, CI/CD pipelines, Linux/Unix, Microsoft Azure, Google Cloud, Snowflake
ML & Data	PyTorch, scikit-learn, Pandas, NumPy, distributed training (64-GPU), DGL, NetworkX
Databases	MySQL, SQL, NoSQL, Neo4j, Snowflake
Automation & Control	Robot workflow orchestration, vision systems, HMI/GUI, ROS, OpenCV, MoveIt
Methodologies	Agile (Scrum/Kanban), test-driven development, cross-functional collaboration

EDUCATION

B.S., Computer Science

Iowa State University | GPA: 3.70/4.0 | Magna Cum Laude | Dean's List

Aug 2021 - May 2025

Ames, IA

PROFESSIONAL EXPERIENCE

Systems Engineer, Embedded Software

ASM America

Jan 2026 - Present

Phoenix, AZ

- Build **Python-based automation platform** coordinating robots, vision sensors, and semiconductor processing equipment in real-time production workflows.
- Develop and deploy **ML models** for precision component inspection; build full-stack internal tooling with **JavaScript/HTML/CSS frontend and Python Flask backend**.
- Implement **industrial HMI/GUI systems** for diagnostics, operator workflows, and serviceability across multiple equipment configurations.
- Design **workflow orchestration and error-handling logic** for multi-step robot operations; manage project data with **SQL databases**.
- Own end-to-end delivery from algorithm design to production deployment; collaborate cross-functionally with mechanical, electrical, and process teams.

AI Undergraduate Researcher

Iowa State University, SwAPP Lab

Aug 2024 - Nov 2025

Remote

- Co-authored "**HydroGAT**" [[paper](#), [code](#)] accepted at **ACM SIGSPATIAL 2025**; implemented distributed training across **64 NVIDIA A100 GPUs** achieving 15x speedup.
- Engineered end-to-end **data pipelines** (PyTorch, DGL, Pandas, NumPy) for large-scale datasets; automated workflows via Bash scripting, cutting setup time 40%.

Software Development Intern

BuilderTREND

May 2024 - Aug 2024

Omaha, NE

- Designed and shipped a **React-based job proposal template**; developed full-stack features in JavaScript, TypeScript, and C# (.NET).
- Migrated legacy ASP pages to React, improving scalability; collaborated in **Kanban/Scrum sprints** with cross-functional teams.

Data Science Intern

Alliant Energy

May 2023 - May 2024

Remote

- Developed **predictive ML models** (Random Forest, SVM) in Python and SQL analyzing electricity usage for 995K customers in Snowflake.
- Predicted EV ownership for customer segmentation; recognized by Director of Data Analytics for impactful business insights.

SELECTED PROJECTS

Autonomous Robotic Chess System [[code](#)]

- Built fully autonomous system: real-time piece recognition (OpenCV), move calculation, and **UR10e robot arm control** (ROS, MoveIt, Python).

ISU Pulse: Android Mobile App [[code](#)]

- Led team of 3; won **Best Manager & Coder Award**, ranked Top 3. Tech: Java, WebSockets, JUnit, GitLab CI/CD.

8-Puzzle Solver: AI Search [[code](#)]

- Implemented BFS, IDS, and A* solvers; achieved **60x speedup** via multiprocessing.