

# Ahmad Soboh

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## EDUCATION

### University of Ottawa

Ottawa, ON

*Bachelor of Software Engineering; GPA: 3.92/4.00*

Graduating Apr 27'

**Coursework:** Data Structures and Algorithms; Design and Analysis of Algorithms; Discrete Math/Structures; System Design with Java; Object Oriented Programming; Databases; Computer Architecture

## PROFESSIONAL EXPERIENCE

### Ciena Corporation – Software Engineer Intern

Ottawa, ON | May 25' – Aug 25'

- Verified NeutrinoX & Neso ASIC FEC modules using **SystemVerilog** UVM testbenches, to strengthen error-correction reliability in Ciena's 1600G optical systems
- Designed and implemented a reusable **UVM SystemVerilog** scoreboard for **SERDES**, **SFEC**, and **DFEC** subsystems, saving **10+** engineering hours/weekly

### Ciena Corporation – Software Engineer Intern

Ottawa, ON | Jan 25' – Apr 25'

- Achieved 100% functional coverage on FEC device signals by creating **C++** and **SystemVerilog/UVM** coverage models and analyzing coverage reports in **Synopsys VCS**
- Built a **Python** automation script to archive and track nightly regressions, analyzing log histories via shell tools and **Git** to cut debug time for recurring failures by **25%**
- Integrated **XPROP** with **SystemVerilog bind** constructs in **UVM** testbenches to resolve **50+** X-propagation issues and stabilize simulation environments

### Ford Motor Company – Software Engineer Intern

Ottawa, ON | Sept 24' – Dec 24'

- Built a vendor defect-tracking platform using **React**, **Node.js**, and **PostgreSQL** to improve supplier QA workflows and reduce defect turnaround by **35%**
- Deployed software to **50+** vehicle ECUs and triaged **1,000+** bugs using **Jenkins** and **CAN** diagnostic tools

### Ford Motor Company – Software Engineer Intern

Ottawa, ON | Jan 24' – Apr 24'

- Improved infotainment module reliability by triaging **200+** bugs and delivering fixes via **Jenkins** CI/CD pipelines
- Reduced bug resolution time by **20%** by developing a beta testing portal using **React**, **Node.js**, and the **Jira API**
- Lead a **30%** increase in FordPass app usage improving bug triage; presented results to the Head of Ford Engineering

### MASV Inc. – Software Engineer Intern

Ottawa, ON | May 23' – Aug 23'

- Built a full-stack admin site using **React**, **Node.js**, and **PostgreSQL** to accelerate ticket resolution by **25%**
- Led CI/CD upgrades using **Docker** and **Git version-control** to eliminate merge conflicts and deployment errors
- Delivered production **Node.js** hotfixes and provided on-call support for enterprise clients

## PROJECTS

### NetWatch – Distributed Network Monitoring & Alerting System | *Python, FastAPI, Linux, ICMP/TCP Probing, Docker,*

- Built a distributed network monitoring tool performing continuous ICMP/TCP health checks across 200+ nodes to detect latency spikes, packet loss, and downtime
- Implemented backend services in **Python (FastAPI)** for device registration, probe scheduling, and alert routing
- Containerized the system with **Docker** and visualized metrics in **Grafana** for rapid debugging and QA validation

### SecureLink – Encrypted IoT Communication Framework | *C/C++, Embedded Linux, MQTT, TLS, OpenSSL, SQLite*

- Developed a lightweight secure messaging framework for IoT devices using **MQTT** with end-to-end **TLS** encryption
- Implemented an embedded Linux client handling message queues, firmware updates, and rotating device certificates

## TECHNICAL SKILLS

**Languages:** TypeScript, SystemVerilog (UVM), Python, Java, C#, C, C++, Kotlin, JavaScript, HTML/CSS

**Frameworks:** React.js, Next.js, Node.js, Express.js, Django, Spring, Tailwind CSS, Shadcn/Radix UI, JUnit, Bitbucket

**Developer Tools:** Docker, AWS, Git, Linux, PostgreSQL, MongoDB, Azure DevOps, Azure Databricks, PySpark, CI/CD

**Concepts:** Frontend, Backend, Fullstack, Game Development, Data Engineering, Data Analysis, DevOps, Cloud Computing, Mobile Development, Database Management, Machine Learning, Artificial Intelligence, Cybersecurity, Design & Verification