Matthew Dworkin

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EDUCATION

Georgia Institute of Technology: B.S. in Computer Science   *Atlanta, GA | August 2022 - May 2026*
- Information Internetworks and Artificial Intelligence

Relevant Coursework: Machine Learning, Artificial Intelligence, Systems & Networks, Enterprise Computing, Database Systems, Computer Organization, Computer Networking, Data Structures & Algorithms, Automata & Complexity, Computer Vision, Linear Algebra, Probability & Statistics, Discrete Mathematics, Design & Analysis of Algorithms,

EXPERIENCE

L3Harris Technologies - Software Engineer Intern   *Palm Bay, FL: on-site | May 2025 - August 2025*
- Built Python/Docker REST API simulator that scaled from 7-person team tool to testing framework used by 50+ engineers across Strategic Missions Division
- Early adopter of company's VSCode AI coding tool, documented use cases and limitations that informed deployment strategy for enterprise-wide rollout
- Fixed critical API bugs for production release, standardizing HTTP status codes and parameter handling for Jenkins CI/CD pipeline
- Designed backend validation utilities and internal automation scripts in Python to support mission-system testing workflows

L3Harris Technologies - FPGA Electrical Engineer Intern   *Palm Bay, FL: on-site | May 2024 - August 2024*
- Designed I2C driver with control logic on PYNQ FPGA platform for ruggedized aerospace applications
- Authored 30+ AI/ML enhancement proposals for FPGA and business development workflows; tested AI prompt strategies for internal tools rolled out to 47,000+ employees
- Executed full FPGA development cycle from requirements to bitfile generation using Vivado and Questasim/Modelsim; delivered verified bit reverser design

Vecima Networks Inc. - Software Engineer Intern   *Duluth, GA: on-site | May 2023 - August 2023*
- Built Bash-based I/O throttling tool using Linux cgroups for storage optimization suite, enabling realistic drive-performance simulation across VM and physical clusters for 250+ customers
- Developed Python multithreading utility that improved throughput of Linux diagnostic tools within storage testing framework
- Assembled and optimized server clusters in pre-production test lab; contributed to Python codebases via GitLab code reviews and Agile standups

PROJECTS

Ringil :   [https://www.linkedin.com/company/ringil-ai]   *January 2026 – Present*
- Built a full-stack AI system Next.js 14, FastAPI and Supabase that converts unstructured proposal and specification documents into structured, queryable requirement and verification data
- Engineered LLM pipelines with schema-enforced outputs, deterministic retries, and validation guards for extraction reliability
- Implemented simulation pipelines using GHDL and Vivado to aggregate waveforms and coverage for decision-ready insights
- Developed persistent traceability linking requirements, generated code, and verification outcomes to support reproducible analysis
- Built data-dense React workflows for browsing requirement hierarchies, simulation artifacts, and verification results

Poolerz :   [https://github.com/tylerrcady/poolerz]   *August 2024 - May 2025*
- Built full-stack carpool coordination platform using Next.js, React, TypeScript, and MongoDB
- Implemented Google OAuth authentication and DBSCAN clustering for automatic carpool matching
- Built multi-step registration, real-time roster updates, and calendar dashboard using Vercel serverless deployment
- Designed RESTful backend APIs and MongoDB data models supporting real-time coordination and scalable query performance

TECHNICAL SKILLS

Languages: Python, Java, TypeScript/JavaScript, VHDL/Verilog, C, SQL, x86 Assembly

Backend & Systems: Node.js, FastAPI, Flask, Docker, Linux, REST API design, PostgreSQL, MySQL, MongoDB

Frontend: React.js, Next.js, TailwindCSS, HTML/CSS

AI & ML: LLM integration, structured reasoning pipelines, TensorFlow, PyTorch, scikit-learn

Tools: Git/GitHub, Bitbucket, Vivado, Vercel, JUnit, LaTeX