Noah G. Dorfman

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Employment

Engineer, *EM Photonics* *(Feb. 2024 - Current)*

Visual Based Wind Sensor

- Optimized embedded C++ image processing code, leveraging oneAPI, openCV and GPU programming with Cuda.
- Transformed user-triggered measurement sequence (5m) to real-time sensor (40s) for data capture customer event.
- Implemented post-processing pipeline, in Bash, Python, and C++ for 3 new video formats to process over 1TB data.

Sensor Compute Engine

- Led integration of embedded Nvidia Orin, external HW, and 9 SW components for successful delivery to customer.
- Refactored monolithic software to daemon system with TCP, simplifying interfaces and increasing robustness.
- Developed Android TAK application as frontend viewer and configurer for ATCOM image processing platform.
- Interfaced client app CoT communication to ATCOM backend via TAK server Java plugin and Java Native Interface.

Member of Engineering Staff / Component SW Lead, *Lockheed Martin* (*Jan. 2022 - Jan. 2024)*

Solid State Radar

- Contributed to codebase with C++ and Java, implementing 30+ modular updates across 5 backend products.
- Captained a multi-component integration test site to debug 5+ hi-pri calibration issues using MATLAB analysis.
- Led team of 3 devs to a successful radar product delivery through program planning and mastering Agile.

Electrical Engineer Intern, *Milwaukee Tool* (*Summer 2021)*

New Product Development / Electrician and Plumbing Tools

- Developed firmware to log usage locations, despite slow connection time, using buffered data and backfilling.
- Enhanced tool metadata structure to store 10,000+ GPS points, utilizing bit-packing for efficiency.
- Created a Python-based data science tool suite to demonstrate GPS utility in marketing scenarios.
- Integrated GPS HW into crimper PCB to achieve TX/RX comms and power through UART and DC/DC conversion.

Projects

JackedTracker / FIT 9to5

- Building a React Native application with Google Firebase backend for data-centric tracking of weightlifting progress.
- Engineering prompts for Anthropic LLM API to provide data-driven feedback to the user.
- Providing fitness and nutrition consultation to 750 followers and 5 clients, through 1:1 training and lifestyle coaching.

Web Development

- Developing multiple websites with HTML, CSS, JavaScript, and Google Firebase for backend services.
- noahgdorfman.com, allroadslead2rome.com, musicalmemoirs.org, gregarmstrongmusic.com

Education

B.S. Computer Engineering, Georgia Institute of Technology *(Dec. 2021)*

President / Powertrain Subteam Lead, Georgia Tech Solar Racing

- Refactored MATLAB strategy suite to 10x manageability, usability, and performance using Python and Git.
- Increased modularity of vehicle electronics by developing a generalized embedded breakout board.
- Simplified vehicle wiring by creating a CAN bus junction board.
- Initiated multi-occupant vehicle R&D with an aggressive schedule, poised to double SR3's performance.
- Managed logistics for a 20-day, 5000-mile cross-country race with a 16-member team.
- Raised $100,000 through strategic corporate and alumni engagement.

Microsoft Azure Zero Trust IoT Data Collection System Capstone, Boeing / Georgia Tech

- Designed and implemented a secure IoT network for real-time data collection, focusing on zero-trust principles.
- Demonstrated system security through practical hacking scenarios involving Bluetooth and encryption.

Skills

Software: C++, C, Cuda, Java, Python, Bash, LLM Prompts, Linux, Android, React Native, HTML/CSS/JS, REST, Git
Hardware: Embedded Systems, PCB Design, Circuit Analysis, Soldering, Benchtop Equipment, Verilog, FPGA