Tanner Andrulis

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Passionate and driven Senior in Computer Engineering & Math. Currently looking for internships in architecture/digital hardware design and applying to graduate programs in CS/ECE to pursue research in next-gen computer architectures.

Education

Purdue University, West Lafayette (2017-2021 exp.)

- B.S. in Computer Engineering, B.S. in Mathematics, Minor in Psychology
- 3.97 GPA. 4.0 ECE GPA.
- *Relevant Courses*:
    - Hardware: Linear Circuit Analysis, Digital Systems, ASIC Design, Semiconductor Devices, Computer Architecture
    - Software: C programming, Data Structures, Microprocessor Systems & Interfacing, Operating Systems (via Qualcomm), GPGPU programming (via Qualcomm), Compilers, Networks
- *Languages:* Proficient in SystemVerilog, C, Python, Java, ARM assembly, Matlab, C++.
- *Additional Skills:* Digital/Analog circuits, FPGA programming, Microcontroller programming, Machine Learning
- *Projects:* Implemented a dual-core processor and cache system in VHDL, designed and constructed an embedded system that scans and maps rooms using infrared range finders, created an AI that reads the news and predicts stock movements

Research and Activities

Graph-Based System Modelling (2019 - Present) - Currently working in undergraduate research to solve massive linear systems using graph-based algorithms. Our solutions are inspired by a special case of graphs arising from the E/M interference patterns of high-speed interconnects in chips.

IEEE Remote Operated Vehicle (2019 - Present) - Member of the IEEE Remote Operated Vehicle software team. Responsible for algorithms that operate submarine thrusters and steer the vehicle along a user-guided path and assists with the computer vision team on algorithms to recognize and react to underwater objects autonomously.

VIP Smart Cities (2018 - 2019) – Member of the Undergraduate Research Smart Cities team. Built a simulator to test autonomous drone piloting algorithms. Used reinforcement learning to train convolutional neural nets and operate building-scanning drones.

IEEE Aerial Robotics (2018 - 2019) - Member of the IEEE Aerial Robotics Team and main designer of the collision-avoidance algorithm that pilots an autonomous plane between skyscrapers.

Work Experience

Qualcomm Technologies Incorporated (May 2020 - Aug 2020)

Digital Hardware Intern

- Worked with the infrastructure team on next-gen processor-memory interface systems.
- Developed tools to automate various segments of the digital design process.

Eaton Corporation (May 2019 - Aug 2019)

Software & Controls Intern

- Worked with diagnostic software and automating scripts to improve testing process of transmission ECU software.
- Authored tools for retrieval of memory contents and diagnosis of errors in ECU memory.
- Authored tools to automate the process of finding diagnostic information from transmission tests.

Tameling's Industries (May 2017 - Aug 2017)

Operations Clerk

- Restocked showroom, managed inventory warehouse and assisted with Spanish speaking customers.