Aria Wright

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WORK EXPERIENCE

Software Engineer, *Ephemeron Labs* — Feb 2024–Present

Microscopy and Metrology startup enabling nanoscale functional imaging of solid-state devices and materials
— Designed and implemented an Ubuntu-based embedded hardware system enabling the remote control of electron microscopes, cameras, and other devices
— Built an interoperability platform and ETL pipeline in Python, enabling clients to streamline data collection and automate remote experimental procedures

Full Stack Software Engineer, *PiSrc* — Feb 2022–Feb 2024

Software consulting startup specializing in digital platforms, ai and data, and enterprise financial solutions
— Led the development of a globalized survey creation system and dynamic statistics dashboard on a tight deadline using Java and React, empowering data visualization for customers in over 100 countries
— Designed and built a pipeline in Java to efficiently convert product data into a modular, standardized store page to improve the customer's ability to evaluate over 500k products
— Led the development of a proof of concept virtual navigation system in Javascript using WebXr and ThreeJS for a business conference with over 1500 attendees
— Designed a Python-based semantic HTML preprocessing pipeline using NLTK and LangChain, enabling the development of a highly accurate custom GPT-based chatbot
— Developed an interactive map of accessible vehicle dealerships using React and the Google Maps API

IT Emerging Talent Intern, *Merck Robotic Process Automation* — June 2021–Feb 2022

Leading global biopharmaceutical company specializing in innovative medicines and vaccines
— Designed an RPA UIPath and Python bot to aggregate customer feedback data and automate a cross-software, business critical process
— Saved an estimated $21.23 per month in instance runtime by testing and improving a UIPath bot and migrating it to an AWS ephemeral server environment

MSC Summer Research Intern, *Maritime Security Center Summer Research Institute* — June 2020–July 2020

DHS-funded consortium focusing on waterborne resilience and threat detection
— Conducted research as part of a multidisciplinary student team to evaluate the performance of AI-designed marine vehicles via digital twinning
— Used ROS, Gazebo, and C++ to simulate the performance and operation of an unmanned surface vehicle with high fidelity
— Led the team's efforts to autonomously plan paths and navigate an obstacle course for a uniform test task
— Presented outcomes and prepared a final research report for more than 60 MSC researchers and DHS stakeholders

Summer Research Intern, *Altorfer Robotics and Automation Lab* — June 2019–Aug 2019

Design studio for software engineering and robotics research
— Researched a methodology through which a multirobot system could autonomously care for an elderly patient
— Tested with the NAO V5 and TurtleBot2 robots to examine their viability in performing common tasks, including delivering medication to a patient and identifying an emergency situation
— Presented results at IEEE UEMCON at Columbia University and published the final research paper in the 2019 IEEE UEMCON conference proceedings

PROJECTS

Bitcoin Mining on FPGA — Feb 2021–May 2021
— Wrote a Python script to allow the Bitcoin hash function to communicate with the Nexys A7-100T FPGA board
— Revamped legacy Verilog code to ensure compatibility with a modern FPGA board

SKILLS

— **Programming Languages:** Python, Java, C++, Javascript, React, Node, Go, Verilog, HTML5, CSS, SQL, .NET, C#
— **Tools:** OpenCV, PyTorch, ROS, Gazebo, AWS, AEM, UIPath Studio, UIPath Orchestrator, Git, Processing, MATLAB

EDUCATION

Stevens Institute of Technology — **GPA: 3.7**

BE Computer Engineering, Minor in Literature — Graduated 2022

PUBLICATIONS

V. DeFreese, T. Wright, I. Robalino and G. Vesonder, "Robotic Solutions for Eldercare," 2019 IEEE 10th Annual Ubiquitous Computing, Electronics & Mobile Communication Conference (UEMCON), 2019.