

COLBY T. DUKE

██████████ • Martinez, GA ██████████ (706) 941-6013 • cduke@gatech.edu
linkedin.com/in/colby-duke • github.com/cdfalcon

OBJECTIVE

Computer Science undergrad applying for internships for the summer of 2021, specifically at forward-thinking, innovative tech companies. Willing to relocate to as far as the west coast if necessary. I hope my previous internships, research experience, and passion for learning will aid me in quickly integrating myself into my new company's culture.

EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY | Atlanta, GA
Bachelor of Science in Computer Science, GPA 3.88

August 2019 – Present
Expected Graduation, May 2023

WORK EXPERIENCE

DATA SCIENCE INTERN | JANUS Research Group | Evans, GA

June 2020 – August 2020

- Developed a line of computer vision sensors to be deployed at a municipal county level and monitor local water meters.
- Integrated said sensors into the Google Cloud Platform, connecting them from the field with LoRaWAN and cellular data.
- Created a user interface with live data using Django, InfluxDB and Grafana.
- Worked on an authentication framework to support multiple Georgia counties utilizing the same UI platform.

SOFTWARE ENGINEERING INTERN | JANUS Research Group | Evans, GA

June 2019 – August 2019

- Aided in the creation of a pair of high spec night vision binoculars which were purchased and militarized by the US Army.
- Developed the drivers necessary to integrate the IR cameras into a Variscite IMX6 board which controlled the binocs.
- Utilized Yocto to create a custom Linux-based OS for the board.
- Worked directly under the CTO and Head Scientist of JANUS for the duration of the project.

ACADEMIC PROJECTS

RESEARCH: ASL INTERPRETATION WITH ML | Georgia Institute of Technology
Researching in Dr. Thad Starner's Contextual Computing Group

August 2020 - Present

- Currently developing a computer game to allow adults to learn finger spelling using American Sign Language.
- Utilizing Hidden Markov Models to detect and judge the different signs and gestures the players perform with their hands.
- Also creating a public dataset of gestures in collaboration with Google for future model training.

RESEARCH: MAGNET PHASE TRANSITIONS | Augusta University
Researched under ██████████

October 2018 – August 2019

- Studied the applications of machine learning and Monte Carlo simulations with regard to magnetic phase transitions.

LEAK GEEKS | Grand Challenges LLC | Georgia Institute of Technology
Team Leader in a Shark Tank-like student organization devoted to solving modern problems

August 2019 – May 2020

- Developed and built a prototype for a sensor which detects water leaks using sound waves.
- Managed the responsibilities of other team members, lead interviews, and attended conferences on the West Coast.

SKILLS

Programming: C++, C#, C, Python, Java, PHP7, JavaScript, HTML, MATLAB, Yocto, RakNet, React.js, JSON, MySQL, TensorFlow, Django, MediaPipe, Assembly, Machine Code
Platforms: Linux (Ubuntu, Debian, Kali), Windows (10,8,7), MacOS (v10.6 – v10.15.x), Google Cloud Platform (GCP)
Hardware: Raspberry Pi (2, 3), Arduino, Teensy microcontroller, Variscite boards (iMX6 based), ESP32, Photon Boards
Software: Visual Studio, GitHub, Xcode, Processing, Eclipse (IDE), Geany (IDE), CLion (IDE), IntelliJ (IDE), VirtualBox, Hyper-V, Circuit Sim, Docker (Containers)
CS Concepts: Machine Learning, Monte Carlo Simulations, Neural Networks, Server Management, Kernel Design (Linux), Cyber Defense/Offense, Database Structure Design, Website Design, Modeling, Data Structures and Algorithms, Computer Organization and Design, Containerization, Objects and Design, Intro to Discrete Mathematics, Script Design, Agile Development Process, Natural Language Processing