# Austin Odell

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## Education

**B.S.E. Double Major in Electrical and Computer Engineering and Computer Science, Minor in Economics** GPA: 3.6

*Duke University* *May 2021*

- Completed Relevant Coursework: *Data Structures and Algorithms, Computer Architecture, Fundamentals of Data Analysis and Decision Science, Digital Systems,* and *Computational Methods in Engineering*

## Technical Skills

- Languages: Java, C, MIPS, Verilog, MATLAB, HTML, CSS, Arduino, and Python
- Programs: Git, UNIX-based CLI, Eclipse, Microsoft Office (Word, PowerPoint, Excel)

## Software Projects

**Facial Recognition** – MATLAB **December 2019**

- Reduced dataset dimensionality to eigenfaces via principal component analysis for improved modeling
- Analyzed classification methods of KNN, Logistic Regression, and Linear Discriminant Analysis
- Classified facial records using the k-nearest-neighbors algorithm on the dimensionally reduced dataset

**Carolina Data Challenge** – R and Python **October 2019**

- Led a data science hackathon team in analyzing crime hotspots and targeted demographics,
- Investigated trends and changes in the data over the past decade
- Presented the visualizations to industry representatives from CapTech, SAS, Barings, Ernst & Young, and Fidelity

**Cache Simulator** – Java **April 2019**

- Created a 16-bit, single level memory cache simulator
- Configured cache to optimize performance by varying cache size, associativity, write type, and block size

**Hoops Stats** – C and MIPS **January-February 2019**

- Created a program to read and organize basketball player statistics
- Implemented a dynamically allocated linked list to sort the players
- Recreated program in MIPS assembly using standard register conventions
- Optimized this MIPS program using dynamic memory allocation and my own sorting function

## Additional Engineering Experience

**Engineering World Health Summer Institute** – Tanzania **June-August 2019**

- Serviced over twenty pieces of medical equipment within a month in a low-resource setting
- Completed cultural and language training to improve communication across language barriers

**Team #1: Measuring Continuous Bladder Irrigation** – Engineer – Duke University **Spring 2018**

- Researched, designed, and prototyped a device to measure input and output flow from continuous bladder irrigation
- Programmed in Arduino to track flows via load cell measurements
- Soldered, wired, and constructed housing for multiple prototyping iterations
- Developed a functioning high-fidelity prototype which was approved by the Duke School of Nursing

## Leadership Experience and Activities

**Duke Men's Rowing** – Safety Officer and Team Member **Spring 2018-Present**

- Compete at the highest level of US Collegiate Rowing
- Member of executive board which creates policy for competitions, practices, coaching, and culture
- Balance the 15+ hour per week commitment with a rigorous academic schedule
- Work effectively with others in an extremely teamwork-oriented environment

**Eagle Scout** – Troop 4 – Hopkinton MA **October 2016**

- Planned, organized, and led a service project to mark public trails at the local YMCA: totaled over 100 volunteer hours
- Served as troop quartermaster and rank advancement instructor for two years each
- Arranged and attended backpacking trips to Yosemite, Yellowstone, and Grand Canyon National Parks

**Lifeguard and Swim Instructor** – MetroWest YMCA summer camp – Hopkinton, MA **Summers 2015, 2016, 2017**

- Lifeguarded during camp lessons, camp open swim, and swim club hours
- Taught swim lessons to campers, including underprivileged and English as a second language children

## Languages

- Spanish: Advanced written and oral proficiency
- Swahili: Basic communication skills