Alexander K. Sweet

510 Riverview Rd Athens, GA 30606 | (401)-659-6183 | Asweet31@gatech.edu | US Citizen

Objective Statement

Electrical Engineering major adept at working in fast-paced interdisciplinary research environments with strong data management skills and experience troubleshooting technical mechanical and electrical problems in team settings. Major interests include energy storage, material science, and electromagnetic radiation for signal and sensing applications. Seeking an internship for the Summer of 2023.

Education

Georgia Institute of Technology | Atlanta, GA *2022 – 2026*
Bachelor of Science in Electrical Engineering, GPA N/A
Relevant coursework: Digital System Design, Linear Algebra, Differential Calculus, Integral Calculus, Physics

University of Georgia | Athens, GA *2021 – 2022*
Transfer with 33 Credit Hours, GPA 4.0

Experience

University of Georgia | Athens, GA *2021 – 2022*

Paid Research Assistant / van der Knaap Applied Genetics Laboratory, Center for Applied Genetic Technologies
The van der Knaap lab conducts research on tomato fruit morphology to better understand fruit development, organ patterning, and the molecular and genetic diversity that led to tomato domestication and selection.

- Assisted lab members with gathering, organizing, and displaying tomato data for lab meeting presentations.
- Presented a scientific poster at the University of Georgia Plant Center Conference.

Posters

Automated Image Based Tomato Ripeness Categorization Using Python and the OpenCV Library
Primary Author

Individual project to automate and advance the rigor in data collection for use in science.

- Developed an algorithm in Python that categorizes tomato fruits in an image by morphological attributes.
- Implemented a new standard in data collection at the van der Knaap Lab.

Projects

Image Classification with Artificial Intelligence March 2022

Two-person cooperative project to create a modular neural network in Python for classification problems.

- Labeled a large dataset of tomato images with their ripeness using a Python algorithm.
- Obtained 95% classification accuracy with the custom neural network on a dataset of over 100 images.

Phone Repair 2020-Present

Individual project to refurbish phones to sell.

- Repaired 20 phones over 2 years by replacing components including motherboards, screens, batteries, buttons, and antennas.

Skills

Programming: Python (image classification, neural networks), R (summary statistics for reports).
Platforms: Linux (Ubuntu), Windows.
Hardware: Gel Electrophoresis (power supplies, UV imaging), Pipets, Autoclaves, Laminar Flow Hoods, Centrifuges.
Software: OpenCV, NumPy, Git, OnShape (CAD), AFNI, Microsoft Office, Google Suite.
Communication: Presentations (large and small audiences), Project Proposals (small audiences).
Languages: English (proficient).