

Pelham B. Bergesen

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Aspiring engineer interested in probability, healthcare, and microcontrollers, seeking entry-level position

EDUCATION

Cornell University

Ithaca, NY

Bachelor of Science in Engineering

August 2020 – May 2024

- Major in **Electrical and Computer Engineering**, Minor in **Psychology**
- On track for Cum Laude honors with a cumulative GPA of **3.5**
- 4-time **Dean's Honor List**: Spring 2021, Fall 2022, Spring 2023, Fall 2023

COURSEWORK & PROJECTS

Microcontrollers: designed original projects in embedded systems (C/C++) and developed teamwork skills

- Built robots, hardware interfacing with ultrasonic, infrared, and wireless communication technology
- Designed an original synthesizer using FM synthesis, algorithmic bird-flocking simulations on RP

Probability: gained a strong grasp on random processes, Markov chains, Monte Carlo, statistical inference

- Solved problems in multiple advanced probability classes, sharpening intuition for probabilistic thinking

Object-Oriented Programming: implemented data structures, algorithms, projects (Java, Python, MATLAB)

- Maze simulation, multi-party search techniques, image transformation, SLLN, optimization
- Biome classifier for satellite images using GIS, feature extraction, and regressions
- Practiced optimization strategies, machine learning techniques, and how to work with large data

Teaching Assistantship, Signals & Systems: taught Python, convolutions, transforms, and spectral analysis

- Python instruction, frequency domain analysis, digital signal processing, student engagement

Other courses: Nuclear Engineering, Circuits, EM Physics, Social Psychology, Psychopathology, UX Design

WORK & LEADERSHIP EXPERIENCE

Imperial College London International Research Opportunities Program

London, UK

Researcher

June 2023 – August 2023

- Headed a project team creating a machine learning model to score surgical training images for quality
- Learned machine learning techniques and applications of my data science coursework using Python
- Created novel technique to find irregular polygons, using keypoint mapping and image transformation
- Continued to assist on this project into the school year, reporting original findings to my supervisor

Plum Flower Software

Franklin, TN

Healthcare Software Intern

July 2022 – August 2022

- Worked with Calerity, a software which creates dynamic schedules for healthcare providers
- Increased overall code coverage by ~10%, creating exhaustive test cases for uncovered functions
- Learned how to test code relevant to the product's front and back-end function, write software test codes
- Gained familiarity with the Git workflow, SQL, and PHP in a professional software development setting

Cornell University Varsity Men's Track & Field

Ithaca, NY

Middle Distance Captain

August 2021 – May 2024

- Voted in by my peers as a Team Captain, three years after walking on to the team as a sophomore
- All-Ivy 2nd team in the 4x800m relay at the Heptagonal Games conference championships

Elizabeth Bills Tutoring

Nashville, TN

Tutor, Office Assistant

May 2019 – May 2020

- Tutored fellow high school students on the ACT/SAT standardized tests, practicing active teaching
- Proctored practice exams, developed testing material, kept time, and coordinated sessions

RELEVANT SKILLS & INTERESTS

C/C++, Python, Java, embedded systems, circuits, Microsoft Office, optimization, power tools, soldering, customer service, probability, music production, piano, intermediate Spanish, running, Eagle Scout