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# Etash Jhanji etashi.github.io

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#### EDUCATION

## Carnegie Mellon University

Bachelor's of Science, School of Computer Science

Pittsburgh, PA

 $May\ 2029$ 

#### Fox Chapel Area High School

High School Diploma, GPA: 4.58/4.00

Pittsburgh, PA June 2025

- o Clubs & Societies: Science Fair, Mu Alpha Theta, Technology Student Association, National Honor Society, Desi Club
- o Coursework: Data Structures & Algorithms, Linear Algebra, AP CS A, AP Calc BC, AP Physics C, AP Bio, AP Chem

#### Pennsylvania Governor's School for the Sciences

Pittsburgh, PA

Summer Program, Hosted at CMU

June - July 2024

- o Coursework: Discrete Math, Computer Science, CS Laboratory, OChem, Cell/Cancer Bio, AI/ML, Mathematical Finance
- Culminating research project involved optimizing computational gameplay strategies in BlokusDuo using Minimax, MCTS (w/CNNs), Reinforcement Learning, and Proximal Policy Optimization

## RESEARCH EXPERIENCE

#### Hukriede Lab @ University of Pittsburgh Integrated Systems Biology

Remote

Summer Student Researcher

Jun 2023 - Aug 2023

Aug 2020 - May 2025

- Completed extensive computational analysis of fluorescent microscopy images
- o Developed a workflow to analyze stain localization on nephron tubules using computer vision
- Understood tissue structures of the kidneys and staining to work on data collection for a research publication

#### Independent Research

Pittsburgh, PA

o Created and presented slides, poster, and papers related to research at local science fairs

- Executed methodological projects in biology and computer science research
- o Utilized data science and machine learning packages to manipulate and train on online data

### WORK EXPERIENCE

#### ScottyLabs: Technology

Pittsburgh, PA

Terrier Full-Stack Developer

Sep 2025 - Present

- o Ideate an agnostic, cusotmizable, self-hosted hackathon management platform for colleges and organizations
- o Design and optimize a novel backend architecture supporting expo (HackMIT style), rubric, and other judging styles in Rust
- o Implement styled pages, interfacing with the backend for participants, judges, and managers with SvelteKit and TailwindCSS

# Projects

Student

- Cardify: Accesses Spotify API to display a profile summary card with a customizable character in the style of Pokemon games.
- SongSorter & Exploring and Applying Audio-Based Sentiment Analysis in Music.: Trained models to determine the emotion of a song on Russel's circumplex model of affect in PyTorch and created a Java application to interface and visualize the data extracted from Spotify clips
- Automation of the Morphological Analysis of Stem Cells & Hukriede Lab: Scripts used to analyze fluorescent microscopy imaging to quantify cell count, shape, regularity, and stain intensity then collect data to make manual inferences.

#### Publications

- Jhanji, E. Exploring and applying audio-based sentiment analysis in music (2024). arXiv:2403.17379 [cs.SD]. doi.org/10.48550/arXiv.2403.17379.
- Maggiore JC, Przepiorski A, Han H, **Jhanji E**, Streeter EC, McDaniels M, Hukriede NA. Loss of Histone Deacetylase 8 Enhances Proximal Tubule Acute Kidney Injury Repair. (2023). Manuscript in preparation.
- Bressler A, Brown A, Frischmann J, Huang M, **Jhanji E**, Liu S. Blokus Duo: Using Deep Search Algorithms to Explore Turn-Based Game Strategy. (2024). bit.ly/pgssjournal.

### SKILLS

Languages/Frameworks: Python, Java, HTML/CSS/JS, Typescript, React, Svelte, TailwindCSS, Vite, Rust, C, R, LATEX Technologies: Microsoft Office, Adobe Illustrator, Adobe InDesign, Neovim

#### Honors & Awards

- Rotary Club Honoree: Selected by the math department and recognized by the Fox Chapel Rotary Club.
- Coding State Champion: PA Technology Student Association coding event involved a theory test and timed challenges.
- First Award: Awarded at the regional and state level by the PA Junior Academy of Science in 2021, 2023, 2024, 2025