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Etash Jhanji

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Education

Carnegie Mellon University — Pittsburgh, PA
Bachelor's of Science, School of Computer Science — *May 2029*

Fox Chapel Area High School — Pittsburgh, PA
High School Diploma, GPA: 4.58/4.00 — *June 2025*

- **Clubs & Societies**: Science Fair, Mu Alpha Theta, Technology Student Association, National Honor Society, Desi Club
- **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*

- **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*

- Completed extensive computational analysis of fluorescent microscopy images
- 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
Student — *Aug 2020 – May 2025*

- Created and presented slides, poster, and papers related to research at local science fairs
- Executed methodological projects in biology and computer science research
- 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*

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

Projects

- **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