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Etrash Jhanji

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EDUCATION

Carnegie Mellon University <i>Bachelor's of Science, School of Computer Science, GPA: 4.00/4</i>	Pittsburgh, PA <i>May 2029</i>
Fox Chapel Area High School <i>High School Diploma, GPA: 4.58/4</i>	Pittsburgh, PA <i>June 2025</i>
Pennsylvania Governor's School for the Sciences <i>Summer Program, Hosted at CMU</i>	Pittsburgh, PA <i>June – July 2024</i>

- Courses: Imperative Computation, Computer Systems, Functional Programming Discrete Math, Linear Algebra, Calc 3
- Courses: Data Structures & Algorithms, Linear Algebra, AP CS A, AP Calc BC, AP Physics C, AP Bio, AP Chem
- Researched optimization of computational gameplay strategies using Minimax, MCTS (w/ CNNs), RL, and PPO

WORK EXPERIENCE

Teaching Assistant: Principles of Imperative Computation (15-122) <i>Carnegie Mellon University School of Computer Science</i>	Pittsburgh, PA <i>Jan 2026 – Present</i>
○ Lead weekly recitations and labs for 25+ students, teaching fundamental concepts in C and C0, including memory management, pointer arithmetic, data structures, and contract-based programming.	
○ Facilitate one-on-one office hours to debug complex logic and ensure student mastery.	

ScottyLabs: Technology
Terrier Full-Stack Developer

Pittsburgh, PA
Sep 2025 – Present

- Ideate an agnostic, performant, self-hosted hackathon platform for the largest hackathon in Pittsburgh with 750+ participants
- 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

RESEARCH EXPERIENCE

Hukriede Lab @ University of Pittsburgh Integrated Systems Biology <i>Summer Student Researcher</i>	Remote <i>Jun 2023 – Aug 2023</i>
○ 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

PROJECTS

- **AniMatch:** Developed a mobile-responsive "Tinder-style" web application using React and Tailwind CSS that leverages the AniList API to provide personalized anime and manga recommendations via a swipe-based interface.
- **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 with 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, L^AT_EX
Technologies: Linux/Unix, PyTorch, Docker, Git, NeoVim, Microsoft Office, Adobe Illustrator, Adobe InDesign

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