Vivek Rajkumar

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EDUCATION

BS in Computer Science and Psychology, *University of Pittsburgh* 2019 – 2024
Minors in Philosophy, Economics, and English Literature GPA: 4.0/4.0
Distinctions in Learning Sciences and Sustainability

- **Relevant Coursework**: Data Structures and Algorithms, Software Quality Assurance, Compiler Design, Web Applications, Cloud Computing, Data Science, Artificial Intelligence, Machine Learning, Deep Learning, Computer Vision, Practical AI, Bias and Ethical Implications in AI
- **External Certifications**: Build Websites from Scratch, Build Front-End Web Apps from Scratch, Build Web APIs from Scratch, React, Test-Driven Development

PROJECTS

Deep Learning Research: Predicting Water Conditions

- Used TensorFlow to evaluate the viability of using temporal convolutional neural networks (TCNNs) rather than traditional recurrent neural networks (RNNs) to predict water temperatures in the Delaware River Basin.

Web App: U-Stories

- Used Flask and Python to create a web app that allows users to collaboratively read and write short stories.

Rust Project: Language Compiler

- Wrote a compiler featuring lexing, parsing, typing, and codegen capabilities from scratch using the Rust programming language.

Website: Colmar Academy

- A responsive website for an imaginary educational institution written entirely from scratch using HTML, CSS, and JavaScript.

EXPERIENCE

Undergraduate Teaching Assistant, *University of Pittsburgh School of Computing and Information* 01/2020 – 05/2023

- Served as a teaching assistant for CMPINF 0401 Intermediate Programming, CS 0445 Data Structures & Algorithms 1, CS 1501 Data Structures & Algorithms 2, and CS 1520 Web Applications.
- Conducted weekly recitations and office hours, graded student assignments, and aided instructors with curriculum integrity and design.

Undergraduate Researcher, *Perfetti Lab, University of Pittsburgh Learning and Research Development Center* 01/2022 – 12/2022

- Designed experimental materials used to study the significances of the N400 and P600 event-related brain potentials in reading comprehension processes.
- Conducted IRB-approved EEG-based exams with research participants in the lab.
- Processed and analyzed experimental data to draw conclusions that served as the basis of my undergraduate honors thesis in psychology.

AWARDS & HONORS

Phi Beta Kappa (Distinguished Junior Member), *Xi Chapter of Pennsylvania, University of Pittsburgh* 04/2022 – present

- Earned induction into Pitt's chapter of the ΦBK national honor society as an undergraduate junior.

Chancellor's Undergraduate Research Fellowship, *University of Pittsburgh Frederick Honors College* 08/2023 – 12/2023

- One of **ten** recipients of a financial award used to help continue my climate-related ML research .

SCI Summer Scholar, *University of Pittsburgh School of Computing and Information* 05/2023 – 08/2023

- One of **two** recipients of a financial award used to support a research project on using artificial intelligence and machine learning to assess and mitigate the effects of anthropogenic climate change.

Brackenridge Fellowship, *University of Pittsburgh Frederick Honors College* 05/2022 – 08/2022

- One of thirty-six recipients of a financial award used to support a research project investigating the relationships of event-related potentials (ERPs) to reading comprehension processes in the brain.

TECHNICAL SKILLS

Languages: HTML, CSS, TypeScript, Java, Python, Rust, R, SQL, GraphQL, C, C++
Libraries and Frameworks: PyTorch, TensorFlow, React, Redux, Angular, Vue, Ember, SvelteKit, Flask, Express.js, Bootstrap, Tailwind
Miscellaneous: Amazon Web Services, Google Cloud Platform, Docker, Kubernetes, PostgreSQL, MongoDB, Jenkins, GitHub Actions