Ayush Praharaj

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EDUCATION

- **Purdue University**   **May 2024**
  Bachelor of Science in Computer Engineering   Cumulative GPA: 3.96
  Minors in Business Economics and Mathematics

EXPERIENCE

- **Bain & Company**   **May 2023 - Present**
  Associate Consulting Intern
  - **Case Team**: Worked on a case team with senior consultants to help a leading private equity firm evaluate a potential acquisition
  - **Market Research**: Conducted primary and secondary research on the target company's products, markets, customers, and competitors using surveys, interviews, and web sources.
  - **Data Analysis**: Performed financial modeling to value the target company and identify key drivers and risks for the client.

- **Siemens AG**   **July 2022 - September 2022**
  Software Engineering Intern
  - **Product Research**: Analyzed finite element analysis methods and simulation parameters to identify processor and memory intensive parameters. Surveyed prior research on emission approximation models.
  - **Backend Development**: Developed and verified prediction models to approximate carbon emissions produced by any given simulation with up to 90% accuracy on ***Python***.
  - **Frontend Development**: Designed and implemented the user interface of a proof of concept using ***Streamlit***.

- **Tensor Flow Model Garden**   **January 2022 - Present**
  Undergraduate Researcher
  - **Image Recognition**: Built and tested small neural networks on ***TensorFlow*** to identify images of human hands with 93% accuracy.
  - **Neural Network Replication**: Reproduced and benchmarked experimental neural networks such as YOLOx-Tiny and MaskFormer for Google's Tensor Flow Model Garden.
  - **Model Optimization**: Enhanced neural network performance by 4% by optimizing model backbones and hyper-parameters.

PROJECTS

- **Module Registry Project**
  Product Manager and Developer
  - Developed and deployed the backend, the REST APIs, and the frontend of the application using ***Go***, ***Firestore***, and ***React*** on ***Google Cloud Platform*** along with ***Continuous Integration and Deployment***.
  - Executed sprints using Agile methodologies, managing risks and incorporating feedback to ensure customer satisfaction.

- **Microcontroller Arcade Game**
  Project Lead
  - Led a 4 person engineering team to develop an arcade style game using a microcontroller and various peripherals.
  - Developed the game logic in ***Embedded C***, designed the circuit schematic, and helped manufacture a PCB.

- **Community Garden**
  Design Lead
  - Led a team to develop a machine learning-based image recognition mobile app using ***TensorFlow*** and ***Android Studios***.
  - Collaborated with Colombian partners to gather requirements and validate prototypes.

LEADERSHIP AND INVOLVEMENT

- **Kappa Delta Rho Fraternity [Diversity & Inclusion Chair]**: Collaborate with other chair members to implement new policies, organize various professional development workshops, and provide mental-health and academic support to members.
- **APO Community Service Organization [Treasurer]**: Facilitate various fundraisers and charity drives, raising upwards of $10,000 worth of donations a semester.
- **ECE 20875 Instruction Team [Senior Teaching Assistant]**: Help students understand data analysis techniques, provide project feedback, and write testing scripts.

SKILLS AND AWARDS

- **Languages**: Python, C, Embedded C, C++, GO JavaScript, Verilog, SQL, Assembly, HTML, CSS, Bash
- **Tools/Frameworks**: NodeJS, ExpressJS, Flask, Docker, Git, GCP, MatLab, Multithreading, CI/CD, TensorFlow
- **Honors**: Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022 Dean's List and Semester Honors
- **Scholarships**: PURCE Economic Scholarship, EXPO Industrial Scholarship, John C Carl Memorial Scholarship