Maanasa Prasad

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EDUCATION

University of California San Diego
Bachelor of Science, Math and Computer Science, Minor in Data Science

Relevant Coursework:
Introduction to Programming and Computational Problem Solving, Basic Data Structures and Object-Oriented Design, Software Tools and Techniques Laboratory, Discrete Mathematics, Mathematics for Algorithms and Systems, Computer Organization and Systems Programming, Advanced Data Structures, Design and Analysis of Algorithms, Software Engineering, Theory of Computability, Introduction to Computer Architecture, Computer Networks, AI: Search and Reasoning.

WORK EXPERIENCE

Software Engineering Internship at Apple Inc.   *June 2024 - Sept. 2024*
CoreOS Platform Enablement Team   *San Diego*

- Identified inefficiencies in the manual debugging process at Apple Inc., where developers spent significant time generating testing batches for high-priority bugs in operating system software. The goal was to automate command generation and improve workflow efficiency.

- Developed a Slack Bot leveraging the Slack API and integrated internal APIs to automate command generation for critical debugging tasks. Utilized regular expressions for command processing, implemented SQLAlchemy for efficient database management, and deployed the application on Kubernetes for scalable and reliable hosting.

- Successfully reduced manual effort from 7 developers spending 5 hours weekly to a fully automated process, freeing up 35 hours of labor for the team and significantly decreasing the likelihood of human error. Enhanced team productivity and ensured more reliable software testing.

Summer Internship at Tata Consultancy Services   *June 2023 - Aug. 2023*
iON Project   *Bangalore*

- Developed a Machine Learning algorithm to create custom question papers for 10th and 12th Board Examinations in India.

- Engineered a Machine Learning algorithm in Python and TensorFlow to generate custom question papers, optimizing the difficulty level based on analysis of past exam papers and ensuring alignment with curriculum requirements.

- Successfully created a dynamic question paper generation system with 90% accuracy that improved the relevance and quality of assessments, providing educators with tailored resources that meet students' learning needs.

Undergraduate Student Researcher at Boolean Lab   *Feb 2023 - Present*
https://github.com/amitashnanda/Medical-Image-Analysis-GUI   *UC San Diego*

- Collaborated with Professor Debashis Sahoo at UCSD on CSE 100 to develop a Graphical User Interface (GUI) for annotating cancer cell images, implementing the interface using PyQt for enhanced usability.

- Gained experience in processing datasets and exploring gene expression data while simultaneously training a Machine Learning algorithm to analyze this data effectively.

PROJECTS AND STUDENT ORGANIZATIONS

Board Member at Computer Science and Engineering Society@UCSD   *Sept. 2023 - Present*
https://csesucsd.com/about   *UC San Diego*

- Professional Development Chair: Organized and led the Career Exploration Program and How to Apply Program for freshmen and sophomores, providing essential guidance on career planning and application processes.

- Events Director: Spearheaded the Startup Recruitment Fair featuring 8 startups, successfully creating multiple internship opportunities for participants.

- Vice President of Events: Coordinated Technical Workshops focused on hands-on programming tasks, including learning new programming languages, to enhance participants' technical skills.

Software Developer at COMPASS@UCSD   *Sept. 2022 - Dec. 2023*
https://compassinstitution.com/   *UC San Diego*

- Contributed to both the Global Projects and Local Projects teams, leveraging data science and mathematical modeling for social good.

- Participated in a global initiative focused on predicting rice growth in India and Bangladesh.

- Locally, addressed homelessness in San Diego by developing a DBSCAN algorithm for data clustering, integrating it with a language model for comprehensive analysis.

- Worked on fine-tuning large language models (LLMs) to create a specialized chatbot focused on homelessness resources in San Diego.

- Awarded the 2022 HDSI Undergraduate Scholarship for this Data Science project, recognizing our contributions to impactful research.

MENTORSHIP

The Society of Women Engineers@UCSD *March 2023 - Sept. 2023*

- Served as a mentor for EDGE, a program by the Society of Women Engineers at UCSD, supporting and inspiring high school girls to pursue careers in STEM fields. Assisted with college essay reviews, taught coding in Python and Java, and provided instruction in college-level calculus to enhance their academic skills.

Society of Undergraduate Mathematics Students@UCSD *Sept 2023 - Present*

- Mentoring freshmen students in Computer Science and Mathematics, providing guidance on coursework and course planning to ensure academic success.

- Assisting students with resume writing and internship applications, equipping them with the skills needed to secure valuable opportunities.

TECHNICAL SKILLS

Languages: Python, Java, C, C++, Assembly, Javascript, Bash, CSS, MATLAB, R

Frameworks: Keras, PyTorch, TensorFlow, PyQt, Pandas, NumPy, Matplotlib, Node.js.