Pranav Lokhande

Software Engineering Student @ USYD

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PROFILE

Third-Year Software Engineering student with a strong foundation in Data Science, specializing in machine learning and deep learning. Proficient in full-stack development (Python, Java, C, SQL, React, RESTful APIs) with experience in collaborative software engineering practices using Git and Jira. Skilled at developing scalable, data-driven solutions and committed to driving impactful technology initiatives.

EDUCATION

Bachelors of Engineering (Hons.) - Software Engineering   *Jun 2023 - Present*
University of Sydney
Pursuing Software Engineering & volunteering as peer mentor and student representative for leadership experience.
Key Courses: Agile Software Development (84), Web App Development (80), Data Science, Big Data & Data Variety (78)

Exchange Programs
*Nanyang Technological University, Singapore - **Introduction to Data Sci, A.I & Cybersecurity***   *Jun 2024 - Jul 2024*
*Yonsei University, South Korea - **Big Data Analysis***   *Dec 2024 - Jan 2024*
*Singapore Management University - **Quantum Computing in Financial Services***   *Jun 2025 - Jul 2025*

WORK EXPERIENCE

Research Assistant   *Mar 2025 - Present*
University of Sydney
- Researched and applied AI techniques to enhance educational resources and teaching tools.
- Developed and fine-tuned LLMs for personalized learning and instructional applications.
- Executed data preprocessing and model training to improve adaptive learning systems and teaching efficiency.

Summer Researcher   *Nov 2024 - Feb 2025*
Charles Perkins Centre at University of Sydney
- Developed & optimized data processing pipelines in Python using MzMine, focusing on analysis of Cu^{63} and Cu^{65}.
- Created visualizations of isotopic peak distributions to support data interpretation, collaborating with Dr. Michael Gotsbacher and Dr. Lake-Ee Quek to integrate the scripts into research workflows.

TECHNICAL SKILLS

- Programming: Python, Java, C, Javascript (React, Node.js), Spring Boot, Django, REST APIs,
- Data Science & ML: TensorFlow, PyTorch, Scikit-Learn, Numpy, Pandas, Matplotlib, CNN, RNN, (Bi)/LSTM
- Tools & Databases: Git, Jira, CI/CD, Vercel, Docker, PostgresSQL, MySQL, Supabase
- Certifications & Interests: FINSIA, Quantum Algorithms (Grovers, QML),CC Candidate (ISC2), CyberSec Principles

HONORS & AWARDS

Charles Perkins Centre Summer Research Scholarship - *University of Sydney*
Selected among 19 students for the Prestigious Summer Research Scholarship in collaboration with CPC.

Winter Data Analysis Challenge Honorary Mention - *Sydney Precision Data Sci Centre & Westpac AU*
Analyzed Sydney train ridership (OPAL) using Python (pandas, NumPy) and visualized trends with Matplotlib, Seaborn.

PROJECTS

Predicting Building Energy Consumption
- Built **CNN, RNN** (Model Bench-marking) and **Hybrid CNN, Bi-LSTM and Transformer models** to improve building energy predictions, using Python, **TensorFlow, and PyTorch**

TeamFlow – Full-Stack Project Management Tool
- Built a **React + Spring Boot** web app for team task management, using **Supabase** for data storage, JWT-based role access control, and deployed via **Vercel** with **CI/CD**.