

Vaibhav Jha

Resume

PERSONAL STATEMENT:

I am a passionate and highly motivated final-year Computer Science student specializing in Artificial Intelligence and Data Science from Griffith University. With a strong foundation in machine learning, data analytics, and software development, I am eager to leverage my technical expertise to solve real-world problems and build innovative AI-driven solutions.

My experience includes developing AI-powered applications, implementing machine learning models, and building full-stack software solutions using Python, JavaScript, React.js, SQL, and cloud technologies. Through academic projects, I have worked on AI-driven color management systems, data visualization tools, and web applications, demonstrating my ability to integrate AI with software development. I am seeking a graduate position, internship, or full-time role as a Software Developer, Machine Learning Engineer, or AI Researcher. With a strong problem-solving mindset, adaptability, and a commitment to continuous learning, I am eager to contribute to cutting-edge projects that drive technological advancement.

Education:

Feb 2021 – Present

Bachelor of Computer Science:

Specializing in Artificial Intelligence and Data Science

Griffith University, QLD

Feb 2021 – Present (Expected Graduation: Oct 2025)

Feb 2021 – Feb 2024

Bachelor of Information Technology:

Software Development

Griffith University, QLD

Feb 2020 – Nov 2020

New south Wales course

Port Moresby International School (POMIS)

Feb 2019 – Nov 2019

International Baccalaureate

St Peters Lutheran College

ACADEMIC ACHIEVEMENTS

- **Academic Excellence Award** – Griffith University (2021)
Awarded for outstanding academic performance.

TECHNICAL SKILLS OVERVIEW

- **Programming Languages:** HTML, CSS, JavaScript, JSX, SQL, MySQL, PowerShell 7, Python, PHP.
- **AI/ML:** Python, TensorFlow, Scikit-learn, NLP (NLTK, spaCy), Data Mining, Computer Vision (OpenCV)
- **Cybersecurity:** OWASP practices, Secure SDLC, Encryption
- **Frameworks:** React.js, React Native, Node.js, Laravel, Bootstrap
- **Tools:** Git, Docker, Android Studio, Xcode, Tableau, Jupyter Notebook
- **Databases:** My SQL, SQLite, MongoDB.
- **Cloud/OS:** AWS (EC2, S3), Ubuntu, Windows, macOS
- **Software:** Microsoft Visual Studio Code, VirtualBox, Ubuntu, Adobe XD, Adobe Photoshop, Adobe After Effects, Premiere Pro, Sony Vegas, Xcode, Android Studio.
- **Other:** phpMyAdmin, Docker, Git, Bootstrap, Node.js, jQuery, React.js, PC Hardware.

Employment History:

- Customer Service Officer
Woolworths – Barrett Street, Robertson, QLD
Jan 2022 – Present
- Developed excellent communication and social skills through customer interactions.

Academic Projects:

- **AI Colour Management System | Work Integrated Learning (AKA Studio)**
 - Built a Python/OpenCV tool to automate color accuracy across devices, reducing manual adjustments by 40%.
 - Integrated machine learning models to predict optimal color profiles for 5+ resolutions.
- **AI Fire-Fighting Multi-Robot System | 3806ICT Assignment**
 - Designed and implemented a ROS-based fire-extinguishing robot system with multi-agent planning.
 - Used CSP (Communicating Sequential Processes) with the PAT tool for action planning and verification.
 - Integrated custom sonar sensors and real-time obstacle avoidance using PID control in Gazebo simulations.
 - Demonstrated intelligent water management with automated refilling behavior in a dynamic environment.
 - Bridge Crossing Problem (PAT/CSP): Modeled and verified constraint-based bridge crossing logic using formal methods.
 - Hierarchical Planning: Developed a decision framework for autonomous underwater vehicle (AUV) path planning using CSP with hierarchical task networks.
- **Data Analytics with Jupyter:** Conducted job market analysis using Pandas, Matplotlib, Plotly, and Seaborn for interactive data visualizations and sectoral comparisons.
- **Computer Vision (Fashion MNIST & Detectron2):** Implemented image classifiers using MLP/CNN architectures and object detection via Detectron2.
- **Network Analytics:** Performed centrality and community detection on job networks using Louvain modularity and clique percolation methods.
- Ethical Technologist:

- Analyzed case studies involving ethical conflicts and applied the Ethical Decision Model (EDM).
 - Worked on projects addressing user privacy, accessibility, and ethical considerations in app design.
- **Mobile Development:**
 - Developed a "Fake Store" app that interacts with the Fake Store API to display products and manage user shopping activities.
 - Developed a React Native application called "Show Image" that displays images specified by user input.
- **Creative Coding:**
 - Developed visually captivating interactive projects using p5.js and p5Play, showcasing creativity and coding skills.
 - Translated artistic concepts into code, resulting in unique and engaging user experiences.
 - Gained proficiency in JavaScript-based creative coding, creating 2D graphics programmatically and utilizing the p5Play library.
- **Web Application Development:**
 - Designed and implemented dynamic web applications using PHP and the Laravel framework, delivering robust and scalable solutions.
 - Acquired comprehensive knowledge of cybersecurity principles, implementing security measures to protect against vulnerabilities and cyber threats.
- **Interactive App Development:**
 - Built interactive and responsive applications using JavaScript and the React.js framework, demonstrating user-centric design and functionality.
 - Developed a deep understanding of user experience (UX) design principles, resulting in highly engaging interactive apps.
- **Fundamentals of Cyber Security:**
 - Expanded knowledge of past cyber-attacks, OS vulnerabilities, packet sniffing, and cryptography.
 - Developed skills in authentication, encryption, and secure software development practices.
- **Data Management:**
 - Developed skills in MySQL for efficient data storage, retrieval, and management, ensuring data integrity and performance.
 - Designed complex database structures to accommodate diverse data requirements, proficiently handling data operations to support data-driven decision-making.
- **Programming Principles:**
 - Gained a solid foundation in programming principles and object-oriented programming using Python.
 - Leveraged Python's simplicity and readability to write clean and maintainable code for various CLI and GUI applications.
- **Software Technologies:**
 - Strengthened Python proficiency in object-oriented programming and version control
 - Acquired skills in accessing and retrieving data from SQL databases.
 - Developed expertise in presenting data through graphical interfaces.
 - Enhanced efficiency in data processing using Python scripting.
- **Group Assignments:**
 - Efficiently completed assigned tasks in group projects, offering proactive assistance to team members and maintaining clear communication.
 - Actively engaged in workshops, interacting with tutors and peers, and alleviated pressure on tutors.

- Demonstrated resourcefulness by independently seeking solutions to challenges and optimizing time management.

Miscellaneous Skills:

- Strong problem-solving abilities with a knack for finding effective solutions.
- Excellent collaboration skills demonstrated through successful teamwork during assignments and customer-facing part-time work.
- Outstanding communication skills in both written and verbal contexts.
- Confident presenter with the ability to articulate ideas effectively.
- Freelance Video Editor: Proficient in Photoshop, Adobe After Effects, Vegas Pro, Premiere Pro.

Referees (Available upon request):

Dr. Abdul Fofanah (Lecturer)

School of ICT, Griffith University | abdul.fofanah@griffithuni.edu.au

Alan Wee-Chung Liew (AI Lecturer)

School of Computer Science, Griffith University | a.liew@griffith.edu.au

Dr. Charles Lee (Project Manager)

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