

Jevi Waugh

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Education

The University of Queensland

Master of Data Science

Relevant coursework: Data Analytics at Scale (SQL, PySpark)

St Lucia, Brisbane

2026 - Current

The University of Queensland

Bachelor of Computer Science (Machine Learning Major)

Semester 2 GPA: 6.5, **Relevant coursework:** Statistical Learning, Pattern recognition and Analysis

St Lucia, Brisbane

2024 - 2025

Experience

The University of Queensland

Summer Research Scholar, (Offered Research Assistant role starting March 2025)

○ Designed and implemented a **PsychoNet-based decoder** for medical image segmentation, deriving the **Fourier Shuffle algorithm** for frequency-spatial upsampling; contributing author on the research paper *Learning Frequency Domain Codes for Semantic Vision*, currently under revision for resubmission.

○ Implemented and evaluated the architecture in **PyTorch**, benchmarking against the **state-of-the-art (SOTA) U-Net model**, achieving improved validation performance and lower GPU memory usage while running experiments on GPU compute nodes using custom training scripts. Supervised by Shekhar (Shakes) Chandra and Wendi Ma

The University of Queensland

Casual Academic

○ Casual Academic for **COMP4702/7703 (Machine Learning)**, **COMP3400 (Functional and Logic Programming)**, **COMP2048 (Theory of Computing)**, and **CSSE1001 (Introduction to Software Engineering)**.

○ Deliver classes, guide students through programming and concepts, and assist with assessment marking and feedback.

UQ Computing Society

Industry Officer

○ Lead the UQCS sponsorship subcommittee, securing partnerships through industry outreach, pitching, and negotiation.

○ Increased sponsorship funding by **27% in 2026** while expanding the sponsor base by **10–12%**.

○ Onboarded new industry partners including **Quantum Australia, Atlassian, Tanda, Citadel, and getcracked.io**.

○ Developed the annual sponsorship prospectus and maintain relationships with industry partners supporting student initiatives.

School of EECS

Jan–March 2025

School of Electrical Engineering and Computer Science

July 2025 - Current

UQ Union

Nov 2025 - Current

Technical Skills and Frameworks

Programming Languages: Python, Haskell, C (ANSI C), Java and SQL **Tools:** Git (Github), Linux, Jira

Machine Learning & Data Science: PyTorch, Sk-learn, Einops, OpenCV, Pandas, NumPy, Matplotlib

Current Coursework: DA at Scale, Intro to DScience, Social Media Analytics, Statistical methods for Data Science

Projects

Vision Transformer Attention Analysis

July – December 2025

○ Investigated internal attention dynamics of Vision Transformer (ViT) architectures using pretrained DeiT models.

○ Built a pipeline to extract and analyze attention distributions across transformer layers.

○ Conducted experiments modifying attention formulations to study behaviour in collaboration with Dr. Kasra Khosoussi.

○ **Technologies:** PyTorch, Hugging Face Transformers, OpenCV, Google Colab

Fine-tuning FLAN-T5 for Biomedical Lay Summarisation

○ Fine-tuned **FLAN-T5** encoder-decoder models on the **BioLaySumm** dataset using mixed-precision training.

○ Evaluated model outputs using **ROUGE-1, ROUGE-2, ROUGE-L, and ROUGE-Lsum** metrics.

○ Achieved **>70% ROUGE performance** across evaluation metrics on held-out biomedical summarisation tasks.

○ **Technologies:** PyTorch, Hugging Face Transformers, NVIDIA A100

TraceForest: AI-Generated Code Detection

○ Developed an explainable Random Forest classifier achieving **94% accuracy** for detecting AI-generated code using stylometric AST features. Integrated **SHAP-based explainability** to identify feature contributions influencing model predictions.

○ Built Python and Java adapters returning classification probabilities for automated pull-request review workflows.

○ Extended CodeGPTSensor via encoder fine-tuning with stylometric features, achieving **>95% accuracy**.

○ Released a developer tool as a **VS Code extension** with **1000+ downloads**. Marketplace link

○ **Technologies:** Python, PyTorch, scikit-learn, Jira