

RITIKA GIRIDHAR

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EDUCATION

Master of Artificial Intelligence and Machine Learning, University of Adelaide, Australia, August 2025

Bachelor of Engineering: Information Technology, Vaasan Ammattikorkeakoulu, Finland, May 2023

PROFESSIONAL EXPERIENCE

ML Engineer, Corcillum Systems Pty. Ltd., Australia: October 2024 – Present

- Building 2D and 3D classification models using PyTorch, YOLO, and MonAI to classify stents and branches from coronary OCT images.
- Fine-tuning 2D segmentation models using MonAI to segment arteries and branches from angiograms.
- Experimenting adding stent and branch classification and segmentation to MedViT's pre-trained model.
- Integrating models into MLFlow, GitHub, and Docker for deployment to the CorSuite app using FastAPI.

Intern, MMAPT Robotics Inc., Australia: June 2024 – October 2024

- Implemented a generic label detector and barcode reader using, OwlV2 and TensorFlow, for MMAPT's image processing pipeline (featured in SXSW Sydney 2024).
- Used GenAI, along with prompt engineering, to test various LLMs for automating label/barcode detection and reading.

Student Project Intern, Fliq Oy, Finland: September 2022 – December 2022

- Developed real-time video surveillance system for summer cabins in Finland by training a YOLO model to detect cars and persons.
- Used Python to capture video footage and Golang for identifying suspicious and unauthorised activities.

Summer Trainee, Napier Healthcare Solutions Pte. Ltd., Singapore: June 2022 – August 2022

- Identified and planned artificial intelligence (AI)-based features for hospital information systems.
- Assessed technical feasibility and designed algorithm framework for AI based healthcare products.

Summer Trainee, Headai Oy, Finland: May 2021 – June 2021

- Wrote code to retrieve and extract data from MS Word and PDF files using a pdf parser.
- Created a data pipeline using Python to convert raw, extracted data into cleaned and recognised keyword sets using Headai's API services.

SKILLS & TOOLS

Languages: Python, C++, C, Java

Tools: Visual Studio, Git, MLFlow, Docker, Jira/Confluence/Bitbucket

Libraries: TensorFlow, Scikit-learn, OpenCV/PIL, Keras, PyTorch, MonAI, Optuna, FastAPI

Web Development: HTML, CSS, JavaScript, PHP

RESEARCH PROJECTS

Satellite House Segmentation for Flood Impact Prediction: Python, PyTorch

- Used DeepNetV3 (ResNet101 backbone) to train a student model using knowledge distillation to segment, label and annotate satellite images to determine how many houses would be affected by flooding.

Hand Gesture Recognition using CNN and DNN Algorithms: Python, TensorFlow, OpenCV

- Used attention-based CNN and DNN models to perform analysis and train a labelled database of 2,000+ images with different hand gestures from different people

Computer Vision Approaches for Crack Detection: Python, TensorFlow, OpenCV

- Used computer vision approaches to find surface cracks in concrete from an online dataset by implementing two methods - contours and convolution masks

Machine Learning in Personalization: [Theseus](#)

- Investigated the applications of ML in personalization, with a focus on how it can be used to improve diagnosis and treatment outcomes for patients with life-threatening diseases and show why personalized treatment is necessary in 2023

AWARDS & INVOLVEMENT

Adelaide Graduate Award, University of Adelaide, November 2024

Global Citizens Scholarship, University of Adelaide, September 2023 – August 2025

Academic Scholarship, Vaasan Ammattikorkeakoulu, October 2020 – May 2023

Erasmus+ Scholarship, Vaasan Ammattikorkeakoulu, November 2021

Student Member, IEEE, May 2021– Present

Responsible Tutor (TA), Vaasan Ammattikorkeakoulun Opiskelijakunta, March 2021 – May 2022

Student Tutor, Vaasan Ammattikorkeakoulun Opiskelijakunta, February 2020 – May 2022

Finland's Top 5, Tulevaisuuden ammattikorkeakoulu Hackathon, February 2021 – April 2021

Retail Assistant Volunteer, Red Cross Australia, February 2024 – Present

REFEREES

Hugh Carpenter

CTO & Co-Founder

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