

# Pugalenthi Magendran

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## SUMMARY

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AI / Machine Learning Engineer who has completed a Master of Artificial Intelligence (Monash) and hands-on experience with foundation models, large language models (LLMs) and computer vision. Built FLAIR-based retinal disease classifiers, a training-data factory dashboard, a LoRA fine-tuned text-to-SQL model and a domain-specific RAG system. Comfortable taking projects from data preparation and experimentation through to internal tools and demos.

## EDUCATION

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<b>Monash University</b> <i>Master of Artificial Intelligence; CGPA: 3.7/4.0</i>	Melbourne, Australia <i>Feb 2024 – Dec 2025</i>
<b>Monash University</b> <i>Bachelor of Business (Finance; minor in Accounting)</i>	Melbourne, Australia <i>Aug 2020 – May 2023</i>

## EXPERIENCE

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<b>Business Fellow (AI Product &amp; Research)</b> <i>Perplexity AI</i>	Feb 2025 – Present <i>Remote (San Francisco, USA)</i>
<ul style="list-style-type: none"><li>Selected into a competitive fellowship focused on <b>AI product strategy</b> and <b>LLM-powered workflows</b>.</li><li>Prototyped no-code and low-code LLM agent workflows (multi-step research + synthesis) to automate internal analysis tasks, documenting UX and latency trade-offs for potential productisation.</li></ul>	
<b>AI Researcher – Foundation Models for Ophthalmology</b> <i>Monash University</i>	Feb 2025 – Nov 2025 <i>Melbourne, Australia</i>
<ul style="list-style-type: none"><li>Designed and ran experiments comparing zero-shot vs linear-probe adaptation of the FLAIR vision-language model for diabetic retinopathy and glaucoma, achieving up to <b>0.92 AUROC</b> and <b>0.74 Macro-F1</b> with 5–20% labels.</li><li>Implemented reproducible Python/PyTorch pipelines for retinal fundus images, including preprocessing, quality filtering, patient-level splits and cached embeddings, so all results can be regenerated from a single configuration.</li></ul>	
<b>Venture Capital Analyst</b> <i>1337 Ventures</i>	Apr 2022 – Jul 2022 <i>Kuala Lumpur, Malaysia</i>
<ul style="list-style-type: none"><li>Researched around <b>400 Malaysian startups</b> and maintained the Malaysia Start-up List, categorising companies by sector, stage and traction to map the early-stage ecosystem and support deal flow.</li></ul>	

## PROJECTS

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<b>Training Data Robo – LLM Training-Data Factory &amp; Dashboard</b>   <i>Python, Streamlit, Docker</i>	2025
<ul style="list-style-type: none"><li>Built a config-driven Python CLI that ingests raw documents and generates multi-task LLM datasets (summarisation, Q&amp;A, key-point extraction, title generation) in JSONL format.</li><li>Developed a Streamlit “Training Data Lab” to inspect, filter and export curated subsets, and implemented QA evaluation scripts (e.g., ROUGE-style, exact match) to compare prompts and dataset variants; containerised the tool with Docker.</li></ul>	
<b>Text-to-SQL with LLaMA (LoRA Fine-Tuning)</b>   <i>Python, PyTorch, LLaMA, LoRA</i>	2025
<ul style="list-style-type: none"><li>Fine-tuned a LLaMA-style model on natural-language /SQL pairs using LoRA and parameter-efficient techniques after normalising schemas and anonymising values to improve generalisation.</li><li>Benchmarked the fine-tuned model against the base model on held-out questions, comparing query correctness and execution success.</li></ul>	

## TECHNICAL SKILLS

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**Languages:** Python, SQL, Bash

**ML / DL:** Machine learning, deep learning, PyTorch, scikit-learn, NumPy, Pandas, convolutional neural networks (CNNs), ResNet-style encoders, Transformers

**LLM / GenAI:** LLaMA, OpenAI APIs, LoRA fine-tuning, retrieval-augmented generation (RAG), embeddings and vector stores, prompt engineering, NLP, FLAIR

**Tools:** Jupyter / Colab, Streamlit, Git, Docker, JSONL data pipelines, AWS, Azure, CI/CD