

Luke Valentino

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EDUCATION

Swinburne University of Technology

Bachelor of Computer Science, Major in Software Development

Melbourne, Victoria

2021 – 2024

EXPERIENCE

Software Engineer | *React Native, Django, PostgreSQL, AWS*

Labourly

February 2025 – Current

Melbourne, Victoria

- Responsible for the whole software development lifecycle of the cross-platform Labourly mobile application, from initial architecture to deployment.
- Defined architecture and networking for mobile application that allows for handling of sensitive tax and medical information in compliance with ISO27001 standard and Australian regulations.
- Designed and implemented APIs, authentication, and middleware in Django for deployment on AWS Fargate.
- Collaborated with UI/UX designer to create consistent and clear user interface and flows.

Research Assistant | *Python, Django, ReactJS, Machine Learning*

Central Queensland University

March 2024 – March 2025

Melbourne, Victoria

- Collaborated with a team to design and develop a web application for processing and analysing video files using object detection models.
- Developed algorithm for procedural dataset augmentation, increasing object detection model accuracy from 39.2% to 75.4%. Generating 13,698 synthetic annotations and 2,211 synthetic images to improve model robustness.
- Trained and implemented models including DETR, YOLOv8-v11, Faster R-CNN, and RetinaNet.
- Contributed multiple sections on machine learning in journal paper set to be published.

Disability Support Worker

Buttons Support Services Pty Ltd

January 2022 – Current

Melbourne, Victoria

- Developed personalised caretaking plans in collaboration with parents and carers, leading to improved client satisfaction.
- Enhanced client learning abilities through targeted education in math and writing.
- Facilitated client participation in community activities, fostering social skill development.

PROJECTS

Video Game Development – Dark Tides | *Unity2D, C#, Shaders*

Dec. 2023 – Current

- Lead software developer for a 7-member team, overseeing the development of the game from initial concept to post prototype phase.
- Designed and implemented a complex Tetris-style inventory system, realistic AI behaviour, unit testing, and stylised dynamic lighting, shadows, and procedural shaders.
- Tracked project tasks and milestones using a Kanban board and agile methodology, collaborating with the team and managing progress using Unity Version Control.

Scraibe - AI Transcription and Summarisation Web Application | *ReactJS, AWS (API Gateway, Lambda, S3)*

- Built a cloud-based serverless web application for processing and transcribing audio and PDF files, leveraging AWS services including Textract for document OCR and Transcribe for audio-to-text conversion.
- Designed RESTful APIs using AWS API Gateway to handle file processing requests, and asynchronous tracking interfacing with AWS Lambda functions for scalable serverless processing.
- Integrated summarisation functionality by leveraging NLP models to provide concise and insightful summaries of transcribed text customised to the user's education level and domain knowledge.

RELEVANT COURSEWORK

Software Testing and Reliability, Data Structures and Patterns, Network Administration, Creating Secure and Scalable Software, Introduction to Artificial Intelligence, Intelligent Systems, Cloud Computing Architecture, IoT Programming

TECHNICAL SKILLS

Languages: C#, C++, Python, HTML/CSS, Java, JavaScript, SQL (Postgres), PHP

Frameworks: Unity, ReactJS, React Native, Node.js, Django

Developer Tools: Git, Unity Version Control, Jupyter, AWS, Google Colab, VS Code, Visual Studio, Arduino, Firebase