Luke Valentino

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EDUCATION

Swinburne University of Technology   Melbourne, Victoria
Bachelor of Computer Science, Major in Software Development   *2021 – 2024*

EXPERIENCE

Software Engineer | *React Native, Django, PostgreSQL, AWS*   February 2025 – Current
Labourly   *Melbourne, Victoria*
- Responsible for the whole software development lifecyle of the 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 in Django Rest Framework to be deployed as an AWS Fargate task.
- Collaborated with UI/UX designer to create consistent and clear user interface and flows.

Research Assistant | *Python, Django, ReactJS, Machine Learning*   March 2024 – March 2025
Central Queensland University   *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   January 2022 – Current
Buttons Support Services Pty Ltd   *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, amd 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