Brian Luu

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EXPERIENCE

- **Buildmat** — Dandenong South, VIC, Australia
  Data Engineer — *Aug 2023 - Present*
  - **Promotion and Expanded Responsibilities:** Promoted to Data Engineer, responsible for developing and managing scalable, cloud-hosted PostgreSQL and MongoDB databases, optimizing real-time data accessibility and processing efficiency.
  - **Automated Data Capture System:** Developed a monitoring system to aggregate market insights, integrating into an end-to-end ETL pipeline powered by AWS. The system processes over 1 million transactions per day, providing a real-time dashboard with analytics and market insights, significantly contributing to the company's expansion strategy.
  - **Warehouse Management System (WMS) Contributions:** Enhanced in-house WMS for logistics, packaging, and order management. Contributed to packing algorithms design and implemented data pipelines to optimize the logistic process. Maintained data integrity and developed data processing pipelines for several in-house and WMS systems. Handled over 500,000 data entries across all platforms.
  - **API Development:** Developed robust APIs to facilitate efficient data management and utilization across cross-functional teams. Automated data acquisition process for multiple projects. Provided data for more than 15,000 products, improving the data capture performance up to 5 times.
  - **Technologies:** Python, FastAPI, Playwright, PostgreSQL, MongoDB, AWS, Apache Airflow, NodeJs, Streamlit, PowerBI.

- **Applied Artificial Intelligence Institute (A2I2)** — Burwood, VIC, Australia
  AI Engineer Intern — *March 2023 - October 2023*
  - **Expert Identification Model:** Developed a semantic search engine for expert identification, implementing a hybrid approach integrating Large Language Models, Graph-based Models, and Clustering Algorithms with custom datasets. Achieved a 15% accuracy improvement compared to single-method approach.
  - **Expert Link Application:** Launched a beta web application allowing users to identify and generate relevant expert connections from specific domains, long-text queries, and expert profiles.
  - **Technologies:** Sentence-BERT, GPT 3.5, RAG, Langchain, UMAP, HDBSCAN, PageRank, TensorFlow, , FastAPI, ChromaDB, Neo4J, NetworkX.

- **Department of Education and Training** — Melbourne, VIC, Australia
  Specialist Technician - Contractor — *March 2023 - December 2023*
  - Configured, managed, and maintained curriculum and admin networks, servers, and educational smart devices. Managed the Windows Server 2016 environment, MDM services, and Microsoft Intune Services
  - Implemented automation procedures for several server management tasks, reducing administrative workload by 25%.

EDUCATION

Deakin University — Burwood, VIC, Australia
Bachelor of Computer Science — *March 2019 - July 2023*

- Specialization in Artificial Intelligence and Data Science.
- WAM: 82/100.
- Recipient of Deakin's International Student Scholarship.

PROJECTS

- `E-Commerce App` - Ongoing: Developing a robust full-stack e-commerce platform, featuring comprehensive backend services.
- `Breaking Captcha`: Developed a web tool employing Computer Vision models to efficiently solve different CAPTCHA types.
- `RecycleNet`: Developed a Streamlit application leveraging a fine-tuned Vision Transformer model for classifying recyclables according to Victoria's regulations.