Brian Luu

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EXPERIENCE

- **Buildmat** — Dandenong South, VIC, Australia
  Data Engineer — *December 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 using AWS and Apache services. 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 tools for logistics, packaging, and order management. Contributed to packing algorithms design and implemented data pipelines to optimize the logistic process.
  - **API Development:** Developed robust APIs to facilitate efficient data management and utilization across cross-functional teams.
  - **Technologies:** Python, FastAPI, Playwright, PostgreSQL, MongoDB, AWS, Apache Airflow, NodeJs, Streamlit, PowerBI.

  Data Specialist — *July 2023 - December 2023*
  - Automated data acquisition process for multiple projects. Provided data for more than 15,000 products, improving the data capture performance up to 5 times.
  - Maintained data integrity and developed data processing pipelines for several in-house and WMS systems. Handled over 500,000 data entries across all platforms.

- **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

- `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, with 92% accuracy on the TrashNet dataset.