

Aaron Ashwin Rajoo

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EDUCATION

National University of Singapore

Feb 2024

B.E. in **Mechanical Engineering**, Minor in **Computer Science** | **Distinction/2nd Class (Upper) Honours**

Ngee Ann Polytechnic

May 2018

Diploma in **Engineering Science** | **DSO Diploma Scholar** | **GPA: 3.93/4.00**

CERTIFICATION

Google Advanced Data Analytics, Google, Jul 2024 - ([Certificate](#))

AWS Certified Cloud Practitioner, Amazon Web Services, Feb 2024 - ([Certificate](#))

AnalyticsX: Big Data Analytics, AdelaideX, Mar 2024 - ([Certificate](#))

Bloomberg Market Concepts, Bloomberg, Dec 2024 - ([Certificate](#))

SKILLS

Python, R, SQL, Snowflake, Azure Data Factory, Data Lake, ML, Power BI, Tableau, AWS, Azure, Git, SQL Server, Java, JavaScript, React

PROFESSIONAL EXPERIENCE

Data Engineer (Contract) | Gunvor Group

May 2024 – Dec 2024

- Designed, built and maintained ETL pipelines to migrate on-premise data extraction packages for fundamental and commodities market data, from various exchanges to the cloud through Azure Data Factory. Streamlining analytics for users.
- Implemented data validation for over 1,000,000 data points, through advanced SQL queries from multiple cloud databases in Snowflake before transforming and building succinct relationships on PowerBI and Pandas. This reduced manual checks, providing more confident and accurate analysis of market trends.
- Developed a web scrapper on Python with Playwright and Pandas to automatically extract over 20,000 attributes of market data from a Data Manager platform, accelerating the data collection process from weeks to minutes.
- Supported traders and analyst by developing derived market data curves, from sourcing, parsing and delivering critical data, to providing expertise for data analysis.

Software Engineer Intern | Cinch SG

May 2023 – July 2023

- Leveraged Next.js to develop frontend operations dashboards to track orders and key business performance metrics by the finance team, enhancing data visibility and decision making.
- Executed ETL for backend infrastructure by utilizing Python and FastAPI to construct SQL queries against multiple databases to specified endpoint APIs for dynamic and reusable data retrieval. Improving data processing efficiency by 30%.
- Optimized the organization's client-facing webstore on React, raising user satisfaction rate to 70%. Collaborated with stakeholders across finance and customer service teams.

Machine Learning Intern | Makino Asia Group

May 2022 – July 2022

- Trained a machine learning model (BGRU) on machining parameters in Python with TensorFlow to predict final surface conditions and operation times for the Wire EDM machines, improving baseline accuracy by 20% on unseen data.
- Researched and performed various feature engineering techniques including data normalization, one-hot encoding, data inversion with Python and pandas, before formatting the data as 3D Tensor inputs for ML.

PROJECT EXPERIENCE

Cervical Landmark Detector (Final Year Project) | NUS & NUH | ([View project](#)) – ([GitHub](#))

Aug 2022 – Apr 2023

- Utilized ML to develop an AI-Computer Vision solution on Python to enhance the diagnosis of airway difficulty in patients.
- Implemented semi-supervised learning to train CNN models with a set of 2,000 labelled medical images. Pretrained models then generated pseudo-labels for more than 20,000 unlabeled images - to iteratively retrain CNN models further.
- Achieved a normalized mean error of less than 3% for locating and measuring relevant neck features.

LEADERSHIP EXPERIENCE

Executive Committee – Quartermaster | NP Guitar Club

Apr 2015 – Apr 2018

- Performed, managed food catering, and handled ticket sales for biannual concerts of up to 400 attendees and facilitated training camps for over 200 members.
- Liaised with the school and external vendors to purchase and allocate equipment to a club of 60 students.
- Handled publicity and recruitment of 60 new members annually.