

ANANYA GUPTA

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EDUCATION

National University of Singapore

Aug 2020-May 2024

Bachelor of Science (Honours)

- Major in Data Science and Analytics with Second Major in Innovation and Design Programme
- Relevant modules: Statistical Modelling, Data Structures & Algorithms, Big Data Systems, Machine Learning, Artificial Intelligence, Data Visualisation, Data Modelling & Computation, High-Dimensional Statistical Analysis

TECHNICAL SKILLS

- **Programming Languages:** Python, R, SQL, SAS, Java, JavaScript, HTML, CSS
- **Data Science Tools:** Jupyter, MATLAB, Tableau, React.js, Git, Docker, Apache Hadoop, TensorFlow, Apache Spark, Netlify
- **Database Platforms:** AWS, PostgreSQL, NoSQL, Firebase, Amazon Redshift, Sisense, FiveTran
- **Additional data-driven skills:** Data Manipulation, Data Analysis, Data Visualisation, Dashboard Building, Machine Learning, Artificial Intelligence, Data Wrangling, Web Development, Feature Engineering & Testing, Web Scraping, Data Modelling

WORK EXPERIENCE

Data Analyst/Engineer Intern | OCBC

May 2023-Dec 2023

- Modelled the data for performance forecasting and time-series correlation to align current metrics to upcoming targets.
- Built ETL tools using VBA, Python and SAS scripts to automate and streamline data extraction & wrangling from various sources.
- Created automated and interactive dashboards for digital and incentive wealth statements using SAS and Tableau for data storytelling.
- Established a database schema and data dictionaries. Developed reporting structure, aligning key metrics to finetune the data mart.
- Product Ideation and Innovation for an OCBC-wide Design-thinking hackathon.

Data Analysis and Operations Intern | Nugit

Dec 2021-Jul 2022

- Analysed and visualized raw CSV files and APIs to create automated reports for clients like J&J, Kellogg's using Tableau and R.
- Assessed product features with Product and Engineering team to identify bugs and deploy custom metrics using SQL and Java.
- Achieved 91% client renewal rate by designing automated reports from raw CSV files and APIs via the platform using NLP and AI, reviewing the ingestion of platform data in Sisense and conducting back-end and front-end data checks.

Marketing Research Analyst Intern | Purnama Outreach

Dec 2020-Jan 2021

- Analysed past advertisements and the B2C demographics using Excel VBA to channelise the marketing initiatives.
- Developed KPIs from sales metrics, through past retail data analysis, to quantify impact and success of the advertisements.

LEADERSHIP & INVOLVEMENT

Vice President | NUS Statistics and Data Science Society

Apr 2021-Apr 2024

- Judged and led the Annual Data Analytics competition(s) and industry events in collaboration with professionals from Grab, AI Singapore, TikTok and Shopee for more than 800 university students.
- Managed various cross-functional units, working directly with the President and the Statistics Department of NUS.

PROJECTS

Transaction Simulation Model for Construcshare

Feb 2023-Apr 2023

- Developed an agent-based simulation model (ABM) from scratch, using Python, which mimics their e-commerce transactions at Construcshare, simulating how feature changes affect the website engagement and interaction for evaluating their current strategies.
- Connecting the model with an API and interactive frontend dashboard deployed via Netlify, linked to Git and Docker, the frontend and backend platform was tested by Construcshare's COO (Dr.Murugesan), its team of developers, and the professors at NUS.

Text Summarisation and Simplification

Feb 2022-Apr 2022

- Trained various machine learning models like RNN, LSTM, Transformer, GRU in Python, to compare the output from different research papers using quantitative metrics like precision and recall, followed by qualitative metrics like brevity.
- Tested among 15 students to compare the summarising and simplifying accuracy of each model with state-of-the-art models.

Post-discharge information management

Jan 2022-Dec 2022

- Built a web-application and creation tool, using React.js and Firebase database, that extracts data from the hospital database and organises it to make information accessible to patients, avoiding delayed, incomplete or complex information dispersal.
- Achieved a positive feedback on testing with over 15 nurses at Alexandra Hospital and 3 NUS professors.

Variational Autoencoders

Oct 2022-Nov 2022

- Researched the mathematical context of variational autoencoders and neural networks, with a latent space visualisation in Python.

2-Factor Authentication application under Orbital Project 2021

May 2021-Aug 2021

- Built a 2-FA Password Manager using SQL, CSS, HTML, JavaScript, to securely store & auto-fill passcodes with single click.
- Successfully tested the password manager and chrome extension across different devices among NUS students.