Karthikeyan Shanmugam

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EDUCATION

NEW YORK UNIVERSITY

Computer Science | Masters | Courant Institute of Mathematical Sciences

Sep 2022 - Present | Expected Graduation: May 2024

NATIONAL UNIVERSITY OF SINGAPORE (NUS)

Industrial and Systems Engineering | Bachelor of Engineering, Honours (Distinction)

University Scholars Programme (Multidisciplinary Academic Programme)

Aug 2013 - Dec 2017 | GPA: 4.05/5.00

STANFORD UNIVERSITY

NUS Overseas Colleges (NOC) Entrepreneurship Programme

Aug 2015 – July 2016 | Took entrepreneurship courses | Startup internship

WORK EXPERIENCE

J.P. MORGAN | Software Engineer (Associate)

Trade Surveillance | Jan 2020 – Jun 2022 | Singapore

- Worked on core trade surveillance detection engines (Java & SQL) that look for non-compliant trading activities
- Developed a data enrichment pipeline (Python, Kafka & SQL) to enhance trade surveillance detection processes

Infrastructure DevOps (Middleware) | Feb 2018 – Jan 2020 | Singapore

- Developed automation tools (Python & Ansible) for middleware web operations helping to reduce manual work
- Worked on a tracking tool (Python) to report the usage statistics of automation tools

Summer Analyst | May 2017 – Jul 2017 | Singapore

- Built a real-time interactive dashboard using QlikView for infrastructure inventory management

PERCOLATA | Product Management & Operations Intern

Aug 2015 – Jul 2016 | Palo Alto, USA

- Drove the development of a scheduling solution by liaising with clients (US) and engineering team (China)
- Automated operational processes - data monitoring, reports for clients etc. (Python, SQL and Tableau)
- Developed a standardised on-boarding process that improved operational efficiency by > 50%

CENTRE OF INNOVATION - SUPPLY CHAIN MANAGEMENT | Industrial Engineering Intern

May 2015 – Jul 2015 | Singapore

- Developed a web app (Python) to optimise SMEs' production planning & scheduling
- Worked on business model canvas and customer validation at a pre-accelerator programme

ACHIEVEMENTS, PROJECTS & ACTIVITIES

TEXT ANALYSIS OF RESOLUTION NOTES | J.P. Morgan - Trade Surveillance | Singapore, 2021-22

Used natural language processing techniques to identify key causes of false positive trade surveillance alerts.

SYSTEMS DESIGN PROJECT - NTUC FAIRPRICE ONLINE (E-COMMERCE GROCERY) | NUS | Singapore, 2016-17

Optimised warehouse processes and product location assignment of national grocer using the Genetic Algorithm. Reduced average order picking time by 26% and increased warehouse capability.

FACEBOOK TREND ANALYSIS | NUS | Singapore, 2017

Scraped Singaporean politicians' FB posts using FB Graph API. Analysed trends and visualised data using Tableau.

MACHINE LEARNING COURSE (UDACITY) - FINAL PROJECT | Singapore, 2017

Used machine learning algorithms and techniques to build an optimised classifier for the Enron Email Dataset.

WAR AGAINST DIABETES DESIGNATHON | Health Promotion Board | 1st Prize | Singapore, 2017

TRAVEL HACKATHON BY EMIRATES | San Francisco, USA, 2015 | API Prize – 1st, Sponsor Prize – 1st

HARVARD CONFERENCE (HPAIR) | Japan, 2014 | Entrepreneurship Panel, Singapore Delegate

SKILLS

Significant Exposure: Python • SQL • Unix • Pandas • Tableau • QlikView • Automod Simulation Modelling

Some Exposure: Java • C++ • Kafka • Numpy • Scikit-Learn • HTML & CSS • Ansible • VBA