Elon Ma

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EDUCATION

University of X X, US
Master of Science in Information Science *(GPA 3.95)* 2022-2024

University of XXX (QS Top 20) X, Australia
Bachelor of Science (Honors) in Computer Science & Eng *(GPA 3.3)* 2017-2021

PROFESSIONAL EXPERIENCE

XXXX Tech X, China
Computer Vision Engineer Intern Oct 2021- Mar 2022

- Contributed to server room inspection robot and solar panel cleaner robot project (C++, ROS, Python, Shell Script)
- Expanded dataset from 200 to 10k images, significantly enhancing data diversity through automated image rendering.
- Implemented precise wheeled robot parking by enhancing the ROS PID control library for accurate positioning.
- Achieved a 95% reduction in testing time for robots with optimised testing environment generation scripts.

Department of XXXX, University of X X, US
Full-stack Software Engineer (Part-time) Jun 2023 - Mar 2024

- Developed an Alexa Skill for at-home physical assessment, leveraging AWS Lambda for scalable serverless services.
- Enhanced user access by developing a real-time assessment records tracking platform with NextJS, SQS, and DynamoDB.
- Improved API response times by 30% with Nginx caching and gzip, reducing payloads by ~70% and backend calls by ~65%.
- Configured CloudWatch with custom alerts for request latency and Nginx cache hit rate, enabling rapid issue resolution.

XXX Lab, University of X X, US
Software & Data Engineer (Volunteer) Jul 2024 - Aug 2024

- Delivered a data pipeline and web portal for efficient medical data access for researchers and doctors. [Github](#)
- Built a high-performance data pipeline that queries ~TBs of data in 1-2 seconds and processes data in ~2 minutes.
- Reduced query time by 90%, and storage by 91% with Spark and data partitioning with Parquet and Snappy compression.
- Reduce cost by utilizing automated transient Elastic MapReduce Cluster and query result caching in S3.
- Designed a user-friendly dashboard website, enabling researchers to easily interpret and retrieve data.

PROJECT HIGHLIGHTS

Camping Advisor Portal [GitHub](#)

- Integrated VisualCrossing Weather API for 15-day forecasts and Google Maps API for campsite discovery near X.
- Visualized meteor shower spots, sunrise/sunset times, and umbrella guidance using D3JS, and Neo4j Aura for data storage and ExpressJS (Elastic Beanstalk) for the backend.

Gnetella Unstructured P2P Network Analysis [GitHub](#)

- Analyzed the Gnutella P2P network's structure using snapshots from August 2002.
- Key insights include network densification, power-law degree distribution, and neutral assortativity.
- Identified resilience factors and potential performance trade-offs as the network expands.

Unity(C#) Game Development [itch.io](#) | [GitHub](#)

- Led a team to win the XXX Award at XXX Game Jam with a Unity-built game.
- Independently developed and released a 3D adventure game on [itch.io](#), source code on [GitLab](#).

SKILLS

Python, Java, C, C++, C#, Javascript, Git, Cloud Computing, Hadoop, Spark, SDLC, Restful API, AWS Services(Lambda, Athena, S3, EMR, Glue, RDS, Redshift, API Gateway, SQS, DynamoDB, Amplify, Elastic Beanstalk, EC2), Docker, Redis, Spring, Django, React, NextJS, NodeJS, ExpressJS), Multi-threading, WebSockets, CI/CD, Kubernetes, MySQL, PostgreSQL, Terraform.