Thai Quach

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Education

San Jose State University - **B.S. Software Engineering**   **B.S. Graduation: December 2021**
University of Texas in Austin **- M.S. Data Science**   **M.S. Graduation: December 2024**

● Relevant Coursework: Data Structure and Algorithm (Java), Object-Oriented Design (Java), Enterprise Software, Software Life Cycle, Assembly Language Programming (x86), Information Security, Networking, Machine Learning (Python), Database Management (SQL, Java)

Skills

● **Programming Languages:** Python (4 yrs), Java (4 yrs), JavaScript (3 yrs), HTML & CSS (3 yrs), C (1 yrs)
● **Web Development:**
  ○ Proficient with **ReactJS**, **NodeJS**, and ExpressJS framework (Javascript)
  ○ Experience **Django** - **Flask** framework (Python) and **SpringMVC** framework (Java)
● Familiar with **databases** integration: **Mongodb** and **CouchDB** (NoSQL) and **MySQL** and **PostgreSQL** (SQL)
● Experience with cloud services and integration:
  ○ **AWS**: **EC2, DynamoDB, S3, Lambda, IAM** - studying for AWS Cloud Practitioner Certificate
  ○ **Google Cloud**: Firebase, **GKE**, Cloud SQL
  ○ **IBM Cloud** and IBM Cloud Paks
● Deploy **micro-architecture** applications with **Docker**, **Kubernetes**, TravisCI, Nginx, and RabbitMQ
● Write unit-tests and autonomous test with **Selenium** and TestComplete
● Familiar with **Unix** commands, **Git** repositories, and virtual machines
● Experience with building/training standard **machine/deep learning models** with **Tensorflow 2.0** and **Sklearn**
● Experience gathering business and technical requirements from stakeholders

Work Experience

Software Engineer Intern   *May 2021 - August 2021*
IBM - Extreme Blue   *Austin, TX*
● Collaborated with 3 other interns and applied leadership, business, and technical skills to solve a business problem under guidance of IBM mentors and sponsor users' weekly feedback.
● Developed an enterprise application on IBM Cloud Pak For Security that facilitates collaboration between security threat analysts.
● Gathered problems and business and technical requirements to arrive at a solution.
● Designed frontend with **ReactJS** and **NodeJS.**
● Designed backend APIs with **Express, GraphQL,** and **CouchDB** database**.**
● Deployed application on IBM Cloud Paks using **Docker, kubernetes, and Red Hat Openshift**.
● Presented and delivered the product to executive panels and CTOs of IBM Security.

Software Automation Testing Engineer Intern   *June 2019 - August 2019*
Software Testing Automation ITS, University of California: Office of the President   *Oakland, CA*
● Write **autonomous user-interface tests** with **Selenium** and **TestComplete** for a new product's interface.
● Generated test reports for test cases and delivered them to team leads.
● Practiced **Agile - Scrum** methodology to quickly deliver minimum viable products (MVPs).
● Presented testing practices and values at stakeholders panel.

Projects

Fast Regional Convolutional Neural Network Model to Detect Deep-Fake   *August 2020 - December 2021*
Personal Project (Team) - https://github.com/ThaiQ/Deepfake_Recognition   *San Jose, CA*
● Trained an **ensemble** machine learning of 5 **R-CNN models** to detect popular Deep-Fake generators and data sources.
● Designed RCNN model with **Tensorflow 2.0** and **tf.Keras**.
● Wrote autonomous python scripts to scrape and clean-up datasets, preprocese, and normalize images before training.
● Developed an interactive **React - Flask** website to publish the model for online users.
● Models achieved 67% of accuracy under test datasets.

Development Team Chair (2019-2020) / President (2020-2021)   *August 2018 - August 2021*
SJSU Student Org - SCE - https://github.com/SCE-Development/Core-v4   *San Jose, CA*
- Developed the organization website using full-stack: **React, Mongo, Express, and Node**.
- Write unit-test cases and implement a continuous integration pipeline with **TravisCI, git, lint, and Jest**.
- Containerized and deployed servers with **Docker** and load balancing traffic with **Nginx**.
- Led full-stack technical workshop and interviewed, recruited, and cultivated new student leaders and engineers for projects and other organizations.

IBM Good Tech Scholars - Hackathon   *July 2020 - August 2020*
IBM - https://github.com/ThaiQ/IBMScholars   *Virtual*
- Built Epic-Education, an online educational platform, targeting low-income elementary school kids with disabilities.
- Developed the project's infrastructure and backend using **NodeJS, Express, and React**.
- Deployed the application on the cloud with integrated AI features from **IBM cloud services: PostgreSQL, Watson's Text-to-speech service, and IBM Cloud**.
- Won 1st place in the hackathon program against 10 different teams.

Canvas Redesign - UI/UX   *November 2020 - Dec 2020*
SJSU CMPE133 - https://github.com/ThaiQ/Canvas-Redesign   *San Jose, CA*
- Redesigned the student Canvas dashboard - aiming to improve the user interface and user experience.
- Designed and implemented the new dashboard with **ReactJS** frontend.
- Integrated the product with **AWS** services: **API Gateway, Lambda, and DynamoDB** as backend stack.
- Wrote unit-test and lambda test cases to ensure cloud communications.

Award

- President Scholar – Awarded from SJSU's Engineering Department for achieving 4.0 GPA   *2018 - 2020*
- Patent Pending @ IBM - A.I. on weather and network traffic to create resilient cloud infrastructures   2021

Organizations

- Software & Computer Engineering Society (SCE), SJSU M.E.S.A. Engineering Program, INROAD