

Thanh Nguyen

Senior Software Engineer

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github.com/memoryonrepeat/

Summary

Senior software engineer with 6+ years of experience working in software industry. Solid Computer Science background and proficient in building scalable systems. Avid problem solver who has an aptitude for tracing and tackling fundamental problems.

Work experience

Backend Engineer October 2018 - February 2021

OLX Autos (formerly Frontier Car Group)

- Maintained and developed 40+ microservices and internal libraries to operate the GraphQL API and event-based workflows that orchestrate the e-commerce platform for used cars in 20+ countries (acquired at 700 million USD valuation).
- Designed and developed new microservices to handle new use cases.
- Led architecture discussion and implementation on multiple topics.
- Optimized performance by tuning queries or simplifying service workflows.
- Improved productivity by building new tools to enable development using local Kubernetes clusters.
- Reviewed team members' pull requests, brainstormed new project ideas/ implementations with product managers, cooperated with other teams to troubleshoot issues via ELK stack.
- Wrote tests, configured CI/CD pipelines for new services.
- Part of the SWAT and on-duty team that handles high priority/ emergency cases.
- Mentored junior team members and interviewed new engineers.
- Technologies used: Node.js (ES6), TypeScript, NestJS, GraphQL, Google Cloud Platform, MySQL, PostgreSQL, Redis, RabbitMQ, ELK stack, Docker, Kubernetes.

Lead Backend Engineer May 2015 - June 2017

Temasys Communications

- Led the development of the [Skylink](#) WebRTC platform including REST API, billing API, signaling server.
- Improved the platform's security and stability by designing better protocols for internal messaging. The platform handles at least 3000 thousand concurrent connections on average.
- Transformed the platform from the original monolithic architecture to distributed architecture.
- Improved development workflow by automating multiple manual processes.
- Mentored new engineers and did code review on a regular basis.
- Technologies used: AWS, Node.js, Express.js, Socket.io, Redis, Bash scripting, nginx, Paypal Braintree API.

Software Engineer Nov 2014 - May 2015

Temasys Communications

- Developed the open-source [SkylinkJS](#) library which leverages WebRTC for p2p applications.
- Built automated test suites for the library.
- Technologies used: JavaScript, WebRTC, Mocha, Chai, Grunt.

Software Engineer July 2014 - Oct 2014

PropertyGuru

- Built a billing and payment solution to support financial operations.
- Built unit tests and integration tests, optimized database performances.
- Technologies used: PHP, Symphony2, PHPUnit, Jenkins, MySQL.

Skills

- **Programming languages:** JavaScript / TypeScript, Python, Go, Java, PHP.
- **Backend development:** Node.js, GraphQL, Socket.io, Redis, WebRTC, RabbitMQ, ExpressJS, NestJS.
- **Architecture:** Microservices, Monolithic, RESTful API, GraphQL API, Serverless, Message broker.
- **Databases:** MySQL, PostgreSQL, DynamoDB, MongoDB.
- **Infrastructure / Devops:** AWS, Google Cloud Platform, Linux, Git, Docker, Kubernetes, Gitlab CI, Bash scripting, nginx, Vagrant.
- **Testing:** Mocha, Chai, SinonJS, Selenium, Test-driven development.
- **Machine learning:** Keras, Pytorch, scikit-learn, numpy, pandas.

Intern Dec 2013 - Jan 2014

SendForensics

- Built a web application for client-relation and software-licensing management.
- Technologies used: PHP, Yii framework, MySQL.

Intern May 2013 - Aug 2013

PowerME

- Built an interactive workspace that allowed student to draw and experiment with 2-D geometry concepts.
- Built intelligent feedback system to justify student's answers using regression analysis.
- Technologies used: HTML5 Canvas, JavaScript, PHP.

Intern May 2012 - Aug 2012

The Software Practice

- Built automated test suites and developed features for web applications.
- Technologies used: Selenium, Java.

Education

Nanodegree in Deep Reinforcement Learning 2020 - 2020

Udacity

- Using Unity, Pytorch, OpenAI gym to simulate and train agents using state-of-the-art algorithms such as Deep Q-learning / Deep Deterministic Policy Gradients, which are combinations of deep learning and classical reinforcement learning techniques.
- Notable projects: Trained a bot to pick up ripe banana, trained 20 robotic arms to reach their target locations concurrently, trained 2 bots to play tennis.

Nanodegree in Artificial Intelligence 2017 - 2017

Udacity

- Worked on multiple AI projects using both classical approaches such as search, planning, hidden Markov models and modern AI approaches such as deep learning (specialized in Computer Vision).
- Notable projects: Game playing agent using Minimax algorithm, Sign language recognizer using Hidden Markov Model, Dog detection using Convolutional Neural Network, Facial key points detection using OpenCV + Convolutional Neural Network.

CS188.1x Artificial Intelligence 2015 - 2015

EdX

- Introductory online course about Artificial Intelligence. Offered by UC Berkeley.
- Notable projects: Pacman game playing agents using heuristic search, adversarial search, reinforcement learning.

Bachelor of Computer Science 2010 - 2014

National University of Singapore

- Full merit-based scholarship, awarded by Singapore Government.

Student Exchange Programme 2012 - 2012

University of Victoria, Canada