Howard Nguyen

Back-end Engineer

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Education

University of California, Berkeley

B.S. in Computer Science and Electrical Engineering — *Graduated May 2015*

- Coursework: Artificial Intelligence, Algorithms, Databases, Data Structures, Machine Learning, Machine Structures, Graphics

Skills

Proficient with: Python, Java, PostgreSQL, Django, Flask, MATLAB
Experience with: C/C++, Elixir, Celery, Ruby on Rails, MySQL, MongoDB, Riak, AWS EC2/S3/EBS/CloudFormation
Familiar with: HTML/CSS, Javascript, Angular2, React, MIPS assembly

Experience

Modsy

Django, MySQL, AWS, V-Ray

Back-end Engineer — *2017 - 2018*

- Built and scaled a trackable 3D render job pipeline that increased throughput by XXXTODOXXX
- Saved customer success 20 hours/week by creating an order management system with automated partial and full product refunding
- Improved query times by 50% and unified data access paterns by creating a data access layer for products and 3D render jobs
- Refactored and removed 20,000 lines of code within the first 3 months
- Increased unit test coverage from 58% to 80% by standardizing good coding practices and review
- Improved site reliability after benchmarking and refactoring expensive APIs and queries
- Created a release tool to automate deploys and release note creation that decreased deploy time by 5 hours/week
- Built job pipeline to convert 3D asset files into V-Ray renderable files
- Provided real time support for critical bugs using Bugsnag, Papertrail, Fullstory, and CloudWatch

Captricity

Django, PostgreSQL, Celery

Full-stack Engineer — *2015 - 2017*

- Designed and created a new regex-like model, from scratch, to support forms with pages that are optional, repeating, and out of order
- Increased job throughput by using Celery to asynchronously batch Amazon Human Intelligence Tasks (HITs) based on perceived effort, task type, and completion time
- Decreased job turnaround-time by building near real-time repricing of undesirable Amazon Human Intelligence Tasks(HITs)
- Increased system reliability by migrating a part of job pipeline into a seperate microservice
- Decreased system downtime through throttling and automatically splitting large jobs that consumed excessive resources
- Improved customer turnaround time by prioritizing jobs based on service level agreement(SLA)
- Ensured system scalability via benchmarking, optimizing Postgresql queries, and segregating Celery infrastructure
- Provided real time support during system outages using Airbrake, Splunk, NewRelic, and custom monitoring integrations
- Mentored two summer full-stack interns and helped them deliver core improvements on form setup and configuration

Natero

Java, Hadoop MapReduce, Pig

Software Engineer Intern — *Summer 2014*

- Built a JSON configuration compiler to chain Hadoop MapReduce jobs and perform cohort analysis on large datasets
- Implemented client retention rate and ”layercake” plot visualizations using d3
- Created a custom LRU Redis cache with locking for parallel operations and manual garbage collection

University of California, Berkeley

Python, Scheme

Lab Assistant and Reader — *2014*

- Assisted in teaching introductory computer science course by holding office hours, answering questions on Piazza student forum, leading section warm-ups, and grading homework

Personal Projects

Present **Family Dog Rescue**, volunteer

2016 **Matcha**, a budgeting and personal finance Flask application

2015 **Smaug**, an invoicing and autoshop management Rails application for Balboa Automotive Service

2014 **Rap Cloud**, a rap phrase aggregator build for LinkedIn Hacker Games