Artur Kashperskiy

Software Engineer

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https://sm5art.github.io
https://github.com/sm5art

Seattle/SF Bay Area

UNIVERSITY of WASHINGTON '2021

EXPERIENCE

Lead Full Stack Engineer @ Heali.ai
June 2019 - October 2019 // Santa Monica, CA
Stack: React Native, AWS serverless, redis, DynamoDB

- Configured continuous integration and deployment for React Native Testflight app and backend w/ CircleCI.
- Collaborated with designers to build UI features in react native app such as camera barcode scanning using native Swift camera OCR plugins.
- Built APIs with Express.js and serverless to support bug reporting and food product data endpoints.
- Integrated Phabricator bug triaging into developer workflow and maintained documentation on developer operations and style.

Quantitative Finance Research Intern @ Nipun Capital
June 2017 - Sept 2017 // Foster City, CA
Stack: Anaconda Python 3.6, MySQL

- Refactored alphagen codebase from python 2.7 to 3.6 and created deployment scripts that automated environment management.
- Web-scraped financial endpoints using BeautifulSoup. Used Airflow to schedule data-scraping and processing pipelines and backtested for signal with internal tools.
- NLP research on sentiment analysis of conference calls for signal using word2vec sentiment embedding models and sentiment dictionary count analysis.

Software Engineer Intern @ Minted
June 2016 - August 2016 // San Francisco, CA
Fulfilment Team
Stack: Flask/Python, MySQL, React/Redux, Backbone

- Bug fixes and integration testing of the fulfilment state machine.
- Wrote unit/integration tests validating processing marketing inserts in Minted orders.
- Built an API endpoint and frontend for an analytics dashboard used as a productivity tool for internal customer design-approval employees.

SKILLS

LANGUAGES

Python, Javascript, Java, C/C++, C#, MATLAB

TECHNOLOGIES

React, Redux, Tensorflow, Keras, MySQL, Cassandra, MariaDB, MongoDB, Redis, Memcached, Nginx, Apache, Gatsby (CMS), Spark, Unity, Unreal Engine, React Native, GraphQL, Airflow

TOOLS

Git, Vagrant, Heroku, Netlify, Docker, CircleCI, Kubernetes, Trello, Excel, AWS Lambda/DynamoDB/S3

EDUCATION

BS Applied Physics at University of Washington
Seattle, WA December '2021
GPA: 3.5
Activities and Societies: Washington Esports, Husky Snow Club, Game Dev Club
Achievements: Quarterly Dean's List (3 quarters)
Notable Coursework: Algorithms and Data Structures, Vector Calculus, Intro to Complex Analysis, Probability I, Artificial Intelligence, MATLAB for Numerical Analysis

PROJECTS

demix

https://github.com/sm5art/demix
https://github.com/sm5art/demix-frontend
A web-based tool which allows music producers to utilise a machine learning cloud service to separate vocals/instrumentals from an uploaded music file. Included building and unit testing a python web micro-service for inference using a pretrained tensorflow model and a front-end written with React/Gatsby. Launched to production for 2 months gaining ~2000 WAU before I had to shutdown due to high AWS costs.

genetic pong

https://www.youtube.com/watch?v=mFOKdGye7vY
https://github.com/sm5art/genetic-pong
Forked a friend's pong game written in the python package pygame from his GitHub and wrote a genetic algorithm from scratch in python that used an unsupervised fitness heuristic to optimise for the best pong brain. The training sequence took roughly ~30 minutes or 30 generations to converge and resulted in an unbeatable AI. Even reducing the paddle size it was adaptive and was impossible to beat after convergence.

kernel

https://github.com/sm5art/kernel
I was curious about operating systems and decided to try to write my own. Using resources from operating system forums online, I was able to put together a simple kernel with graphics capabilities (printing text), a cpu clock, global descriptor table, and interrupt handling for x86 processors. Setup linking and compiling for the kernel with a linux gcc environment Makefile.