KEVIN FANG

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Education

B.S. Computer Science 09/2019 – 05/2022
(concentration in Data Science)
Duke University, Trinity College of Arts and Science, Durham, NC

B.S. Computer Science 09/2018 – 05/2019
New York University, School of Engineering, New York, NY

Major GPA: 4.00/4.00
Data Structures and Algorithms, Object-Oriented Programming, Statistics and Probability, Discrete Mathematics

Work experience

Data Science Intern 05/2019 – 08/2019
Intralinks, New York, NY

- Build Python scripts to scrape relevant news and tweets from the internet using ScraPy
- Create and deploy NLP models to predict possible M&A deals in the future

Data Scientist - Intern 06/2019 – 01/2019
Curoverse Research, Somerville, MA

- Developed Python reverse gene + RSID searching tools for open-source genome encoding software (tiling)
- Developed statistics pipelines to check for concordance between BAM & CRAM file formats with CWL
- Created ML classifiers to predict eye color and blood type to 95% accuracy in TensorFlow & scikit-learn
- Presented poster on open science and phenotypic analysis at the i2b2/tranSMART symposium to 100+ attendees at Harvard Medical School

Biomechatronics Intern 03/2018 – 03/2018
MIT Media Lab, Cambridge, MA

- Developed high throughput compute cluster for finite element modeling of prosthetic limb designs
- Increased computation speed by over 60% by reusing old computers and "HTCondor" cluster software.
- Built Docker images for quick deployment of HTCondor on new machines
- Automated job management and submission using custom Python scripts

Projects

Relief | Mesh 10/2018
Harvard University Fall 2018 Hackathon (HackHarvard)

Facebook Award: Hack that Best Builds Strong Communities
- Designed and built low-cost distributed mesh system for communication after natural disasters
- Physical mesh nodes built using Raspberry Pi Zero, long-range radios (LoRa), and GPS modules
- Implemented huffman coding for string compression to increase communication bandwidth

Projects

PillUp Medicine Dispenser 09/2018
Johns Hopkins University Fall 2018 Hackathon (HopHacks)

HopHacks: 1st place out of 62 teams
Siemens Sponsor Award: Best Healthcare Hack
- Designed and built low-cost robotic pill dispenser with Arduino Mega, Raspberry Pi, and servo motors
- Created web server in Flask, used Socket.io for communication protocol
- Created physician web view in React, designed with Material-UI

DearAI 02/2019
UPenn Winter 2019 Hackathon (PennApps XIX)

PennApps: Top 5 Hack, Best Entertainment Hack
- Developed AI-based journaling app, providing user suggestions based on journal entry sentiment/tone for food, meditations, parks, movies, etc
- Integrated IBM Watson Tone Analysis, Yelp, Youtube, Spotify APIs to source suggestions
- Built React.js frontend, Express.js backend, integrated with APIs for UI.

Flappy Bird with Deep Reinforcement Learning 04/2018

- Trained neural network to play the video game "Flappy Bird" flawlessly using reinforcement learning
- Used policy gradients in Python and TensorFlow

Sentiment Analysis Visualizer 10/2018

- Created news website scraping tools using Python
- Performed sentiment analysis using Google Cloud Platform NLP toolkit to plot views toward climate change as function of time in Tableau

Skills

Programming
- Python, C++, Javascript, Java, C, Kotlin, HTML + CSS
- Data Structures & Algorithms
- Web, Android Development (Android Studio)

Libraries
- NumPy, Scikit-learn, TensorFlow, RxJava
- React.js, Express.js, Socket.io, Node.js
- Common Workflow Language (CWL)

Miscellaneous
- Arduino, Raspberry Pi, Linux
- Android Studio, Eclipse IDE, Xcode
- Git, GitHub, LaTeX, Docker

Publications

Genomic Eye Color Classification with Machine Learning 08/2017