ZACK LIGHT

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SELECTED WORK EXPERIENCE

Amazon.com Seattle, WA
Software Engineer July 2021 - Current
- Develop a search engine for developers with Lucene

Nokia Bell Labs, Deepfield Networks Ann Arbor, MI
Software Engineer Intern May 2020 - August 2020
- Extended high-volume (petabytes) networking data pipeline for 6.1 billion subscriptions' instant analytics
- Convert data three-way among network layer packets, data structures, and Kafka brokers with C & Cython
- Reduce time (52%) and memory usage of building BGP IPv4&6 route maps using Pandas vectorized operations
- Enhanced multi-thread system of 47k LOC to manage deployments on AWS, docker for 100+ engineers globally

Software & Application Innovation Lab Boston, MA
Software Engineer Intern May 2019 - August 2019
- Automated pose estimation of mice with transfer learning (ResNet) for 17 TB of videos in Python and Bash
- Built React app visually comparing confounding biases for papers, reducing CircleCI deployment time by 28%
- Expended functionalities in genetic design codebase with Spring, Neo4j, RESTful APIs, and microservices
- Developed progressive Angular app for teens with learning disabilities to socialize

Information Systems Department, Boston University Boston, MA
Research Assistant January 2019 - August 2019
- Trained an LSTM model (90%+ accuracy) with about 1000 samples (balanced) to classify gun violence news
- Validated new embedding-based metrics on information diversity with large SQL and flat-file datasets

China Minsheng Banking Corp. (36th largest bank globally - S&P) Beijing, China
Algorithm Engineer Intern, Robo-Advising Team June 2018 - August 2018
- Built context-aware chatbot with neo4j to converse with security buyers, facilitating 200+ employees
- Engineered scalable program to rank, classify, and summarize news to publish on WeChat using modified TF-IDF and MMR algorithms (processing 33,582 word/s on average, 5 people's daily workload)
- Developed deep learning models (LSTM) trained from 500K+ news articles for sentiment analysis

PROJECTS

Study Together!, discord.me/studytogether November 2020 - July 2020
- Create a system from scratch real-time to rank 510K+ members' online study time, used for over 3 centuries
- Develop a MySQL database logging users' time records and backend for websites & dashboards

Crowd Sourced Internship Opportunities July 2019 - October 2019
- Founded and managed crowd sourced React website for internship opportunities in 2020 (68k~ unique views)
- Support CSV import/export, column filter, search, sort on the web

SKILLS

Foundation: Python, C++, C, JavaScript, Java, R, OCaml, SQL, NoSQL (MongoDB, Neo4j), shell, Linux, Vim, LaTeX
Tools: Lucene, Hadoop Ecosystem, TensorFlow, Scikit-learn, React, Angular, Flask, Spring, Rasa, Git, Docker, regex
Domains: machine learning, web/mobile development, web crawling, task automation, data visualization

HONORS & AWARDS

Most Outstanding Graduate Submission, Global Vivli-Microsoft (Privacy) Datathon, Boston June 2019
1st place, Google Cloud & NCAA hackathon, MIT January 2019
Project Demonstration, Alibaba Apsara/Yunqi Computing Conference, Hangzhou, China September 2018
Best Sector Presentation, BU Finance & Investment Club April 2017 & April 2018

EDUCATION

University of Michigan, College of Engineering, Ann Arbor, MI May 2021
Cumulative GPA: 3.956/4.0
BSE, Double Major in Computer Science & Data Science, Minor in Mathematics
Activities: *Michigan Data Science Team - VP of Education, Machine Intelligence Community*
Classes: *Computing Systems, Databases, Computer Security, Programming Languages, Search Engine, Computer Vision, Natural Language Processing, Computational Finance, Bayesian Statistics, Real Analysis, Stochastic Processes*