Nithin Raghavan

(678) 200-5839 | rnithin@berkeley.edu | rnithin1 (Github) | linkedin.com/in/nithinraghavan

EDUCATION

University of California, Berkeley (Class of 2020) *Aug 2017 – present*
Computer Science *Bachelor of Arts*, Applied Mathematics *Bachelor of Arts* (*GPA: 3.687*)

- CS61B: Data Structures
- CS170: Efficient Algorithms
- EE127: Optimization Models and Applications
- Blockchain for Developers
- Math 126: Partial Differential Equations
- CS70: Discrete Maths and Probability

Georgia Institute of Technology *Aug 2015 – May 2017*
Courses Taken while in High School

- Applied Combinatorics
- Number Theory and Cryptography

EXPERIENCE

→ **RISE Lab, UC Berkeley** *Jun 2018 – present*

- Designed and implemented a data visualization tool using Jupyter Notebook for hyperparameter optimization for Cirrus, a serverless machine learning framework
- Progressing towards using AWS Lambdas for model primitives such as logistic regression, random forests

→ **IBM Almaden Research Center, Machine Learning Laboratory** *Jul 2017 – Aug 2017*

- Trained an artifical neural network with visual question answering abilities on Stanford's CLEVR dataset with 70% overall accuracy
- Implemented sequence autoencoders, CNNs and LSTMs with Tensorflow and Keras

→ **Georgia Institute of Technology School of Aerospace Engineering** *Sept 2016 – May 2017*

- Researched development of high-bandwidth, high-efficiency wireless energy transfer methods
- Proposed circuits with millimeter waves and Fabry-Perot resonators to increase efficiency up to 90%

PROJECTS

→ **Resource-Provisioning GPU Server** *Dec 2017 – present*

- Developed a Python-based shell to automate on-demand request processing and resource provisioning in a GPU + CPU cluster
- Collaborated on a team to create a program that utilizes Slurm for cluster management and deploys tasks in Docker containers

→ **TaxiFindMe** *Apr 2018*

- Routing web app that helps New Yorkers find the best spot to minimize taxi waiting time, taking into account travel time and time of day
- Preprocessed 20 million entry taxi dataset with k-means machine learning algorithm; for querying, KNN is run from an input location to find nearest cluster. Frontend employs Django
- Reduced query time up to 94% from the naive implementation

→ **ShirtMapper** *Jan 2018*

- App that resizes images of custom shirts and maps them onto people
- Utilizes OpenCV and Scipy, and uses Haar classifiers for edge detection; frontend employs React Native

SKILLS

→ **Awards:** Exploravision National Contest *2016*

- Wrote a paper proposing blockchain's potential link to autonomous vehicles; won honorable mention.

→ **Models/Algorithms:** Ridge regression, logistic regression, SVM, random forests, least squares, PCA, SVD, KNN, k-means, deep learning (CNNs, LSTMs, GANs, autoencoders)

→ **Frameworks:** Numpy, Scipy, Sk-learn, Keras, Tensorflow, OpenCV, Docker, Slurm, d3js, ta-lib

→ **Programming Languages:** Python, Java, C, C++, C#, Bash, LaTeX, SQL, JavaScript, Matlab

→ **Operating Systems:** Unix-like systems (Linux, FreeBSD, Mac OS X), Windows

→ **Certifications:** Android Development (University of Maryland through Coursera)