Nithin Raghavan

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EDUCATION

University of California, Berkeley
Computer Science, *Intended Bachelor of Arts*, Mathematics *Intended Minor*

- CS61A: Structure and Interpretation of Computer Programs
- Blockchain for Developers
- Physics 5A: Introductory Mechanics and Relativity
- Astronomy 84: Black Holes
- CS61B: Data Structures
- CS70: Discrete Mathematics and Probability Theory

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

- Linear Algebra
- Multivariable Calculus
- Applied Combinatorics
- Number Theory and Cryptography

Awards: Exploravision National Contest *2016*
Wrote a paper proposing blockchain's potential link to autonomous vehicles, and won honorable mention.

EXPERIENCE

IBM Almaden Research Center, Machine Learning Laboratory *August 2017*
Used Tensorflow and Keras to create artifical neural networks implementing the bag-of-words representation in order to analyze visual reasoning abilities on the CLEVR dataset, which encouraged complex reasoning in response to sophisticated English questions. Included sequence autoencoders, CNNs and LSTMs.

Georgia Institute of Technology School of Aerospace Engineering *September 2016 – May 2017*
Helped research the development of high-bandwidth, high-efficiency methods of energy transfer using millimeter waves, involving proposed circuits which have the potential to increase efficiency of wireless energy transfer up to 90%. Shadowed professors and graduate students working on wind tunnels.

Georgia Institute of Technology School of Physics *May 2016 – July 2016*
Shadowed professors and graduate students researching the potential impacts of the September 2015 LIGO sighting of gravitational waves. Worked with the Einstein toolkit to model relativistic astrophysical phenomena.

PROJECTS

Resource-Provisioning GPU Server *December 2017 - present*
Developed, and currently helping maintain, a program and Python-based shell to automate on-demand request processing and resource provisioning in a GPU + CPU cluster within the EECS department for UC Berkeley use. Uses Slurm for cluster management, and deploys tasks in Docker containers.

Using Keras on CLEVR Dataset to Test Visual Reasoning Prowess *August 2017*
Used the Keras API to act on the CLEVR dataset to test artificial neural network visual reasoning abilities.

SKILLS

Frameworks/Softwares: Numpy/Scipy, Pytorch, Keras, Git, Unity3D, Docker, Slurm, Ethereum VM
Programming Languages: Python, Java, C, C++, C#, CLisp, Bash, LaTeX, SQL, JavaScript, Solidity
Operating Systems: Unix-like systems (Linux, FreeBSD, Mac OS X), Windows
Certifications: Android Development (University of Maryland through Coursera)
Languages: English, Spanish, Tamil