Karan Samel

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EDUCATION

Purdue University, West Lafayette, IN

Bachelor of Science in Computer Science (Honors) and in Applied Statistics.   *August 2014 - May 2017*
GPA: 3.95

MAJOR COURSES

Artificial Intelligence, Data Driven Policy Making, Data Mining and Machine Learning, Machine Learning by Andrew Ng (Stanford) - Coursera, Algorithm Analysis, Data Structures, Systems Programming, Applied Regression Analysis, Time Series Analysis, and Linear Algebra

EXPERIENCE

Neural Network Prediction for Real Time Bidding: NSF REU Fellow   *August 2015 – May 2017*

- Worked on the iPinYou advertisement dataset that included multiple features describing a user and indicating if the user clicked a certain advertisement.
- Tested multilayer perceptrons and convolutional networks to achieve high prediction scores even with minimal occurrences of advertisement clicks.
- Built external Nvidia Titan X GPU setup (https://goo.gl/5RZ2mS) to run convolutional neural networks 80 times faster.
- Utilized Python NumPy, Theano tensors, and CUDA acceleration.

Purdue Aerial Robotics IEEE: Software Co-Lead   *August 2014 – August 2016*

- Built a plane that flies autonomously to follow waypoints, performs search patterns, and carries a small artificial payload to drop.
- Developed a communication API to send telemetry data and receive objectives from a remote Django web server to our ground control station.
- Created redundant systems to keep information flow intact between the plane, the ground station, and the competition server.

ACE Coding: Lead Teacher, Curriculum Developer   *August 2013 – August 2016*

- Taught middle school students "Scratch", which is a visual programming tool, Java, and C++.
- Developing new curricula to expand lessons to other programming languages and skills.

Amador Valley High School Robotics Club (AVBotz): Software Lead   *August 2010 – July 2014*

- Developed an autonomous submarine that could navigate through and manipulate obstacles in an underwater course at RoboSub. Received 6th place out of 30 college teams at Robosub 2013.
- Modular classes for each of the obstacles, written in C++.

TECHNICAL SKILLS:

- Proficient in Python, C/C++, Java, R, Linux/macOS systems.
- Experience working with NumPy, Theano, Git, Tableau, and Gephi.
- Learning TensorFlow, Hadoop, and Spark.

AWARDS & SCHOLARSHIPS

- Research Scholarship - National Science Foundation (NSF) Research Experience for Undergraduates (REU) from August 2015 - August 2016.
- Presidential Scholarship awarded for 2014 – 2018.