Karan Samel

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OBJECTIVE

Developing predictive and autonomous solutions using machine learning modeling and statistical analysis.

TECHNICAL SKILLS: Proficient in C/C++, Java, Python, R, Linux/OS X systems. Experience working with SciPy and Theano libraries.

EDUCATION

Purdue University, West Lafayette, IN

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

Amador Valley High School , Pleasanton, CA   *August 2010 - June 2014*

MAJOR COURSES

- Artificial Intelligence (CS 471)
- Data Driven Policy Making (CS 490)
- Data Mining and Machine Learning (CS 573, CS 390)
- Algorithm Analysis (CS 381)
- Data Structures (CS 251)
- Systems Programming (CS 252)
- Applied Regression Analysis (STAT 512)
- Time Series Analysis (STAT 420)
- Linear Algebra (MA 351)

AWARDS & SCHOLARSHIPS

- Research Scholarship - National Science Foundation (NSF) Research Experience for Undergraduates (REU) - August 2015 - August 2016
- Presidential Scholarship - 2014 - 2018
- National AP Scholar

CERTIFICATIONS

- Machine Learning by Andrew Ng (Stanford) - Coursera

ACTIVITIES

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

- Worked on the iPinYou advertisement dataset that included multiple features describing a user and indicating if the user clicked a certain advertisement. iPinYou hosts advertisement campaigns for real time bidding.
- Tested multilayer perceptrons and convolutional networks to achieve high prediction scores using a hybrid neural network and factorization machine model.
- Built external Nvidia Titan X GPU setup (https://goo.gl/5RZ2mS) to run convolutional neural networks 80 times faster.
- Publishing results to Journal of Purdue Undergraduate Research.

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

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.

iOS Application Developer   *March 2013 – August 2015*
- Published a mathematics application on iStore called "My Pocket Solver", which is an equation solver and can determine common statistical values given a data set.

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.