20 Chelsea Ct.,
Hillsdale NJ 07642

SUNG (ROGER) J. KIM

(201) 787-7020
sjkim1@andrew.cmu.edu
US Citizen

EMPLOYMENT

Software Engineer, Intern **Big Switch Networks** **Summer 2016**

Packet-level Network Engineering

- Optimized network pipeline by using Docker to consolidate functionality in SDN (Software-Defined Network) product for monitoring computer networks
- Enabled real-time analysis of network traffic through my pipeline optimization
- Demonstrated real-time analysis by implementing fast port scan detection, using the Threshold Random Walk algorithm from MIT research paper ("Fast Portscan Detection Using Sequential Hypothesis Testing")

Technical Intern **Bank of New York Mellon** **Summer 2015**

Application Backend Development

- Constructed analytical framework that specializes in hierarchical analyses
- Utilized superior performance of graph database (Neo4j) for hierarchical analyses, previously unavailable through existing relational database infrastructure
- Optimized the import process of millions of data points and relationships from hours to a few minutes by increasing the use of memory and reducing the use of network

Machine Learning

- Trained classifier for anomaly detection to inspect client behavior for evidence of fraud
- Prototyped engine to recommend services to clients based on what services they already used and other attributes about them

EDUCATION

Pittsburgh, PA **Carnegie Mellon University** **Fall 2012 – May 2017**

- B.S. of Information Systems with an Additional Major in Computer Science
- GPA: 3.42/4.00
- Relevant Courses: Computer Systems, Parallel and Sequential Data Structures and Algorithms, Functional Programming, Machine Learning, Software Construction, Application Design and Development

PROJECTS

- **Routine** Developing Google Chrome extension for organizing your work time by providing visual cues to discourage staying on distracting websites during times allotted for work.
- **Game Theory Analysis of Hacker Behavior** Made mathematical models of the incentives of hackers and wrote code to simulate hacker attacks in randomly generated networks. Worked with Professor Larry Heimann.

ADDITIONAL EXPERIENCE AND AWARDS

- **CMU Idol Second Place Winner** *2015*: The first place winner came out of nowhere with a beautiful rendition of "I Dreamed a Dream" from Les Miserables. My performance of Bruno Mars' "Uptown Funk" stood no chance.
- **Programming Instructor** *Summer 2014*: Taught a class of 7 middle school students Python.
- **President's Volunteer Service Award** *2013*: Volunteered at Spectrum for Living, a home for developmentally disabled adults, singing songs and playing with them to brighten their day.

LANGUAGES AND MISCELLANEOUS

- **Languages**: Java, Python, SML, R, Ruby on Rails, HTML/CSS, C, SQL
- **Hobbies**: Ping pong, Fountain pens/Calligraphy, Music, Podcasts