Nakul Gulati

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nakulgulati.com

Experience

Software Engineer

Baxi: The Bike Taxi

August 2016 - Present

- Baxi is India's first on demand motorcycle for hire service
- At Baxi I primarily work on the server backend and the hybrid (cordova) iOS mobile application
- Designed and implemented the iOS hybrid application from ground up
- Implemented a logging mechanism for the backend server to generate functional flow logs, without the need to explicitly call/write log calls in functions

Research Assistant

LiveLabs@SIS, SMU, Singapore

June - August 2015

- Proposed and prototyped a system to detect occupancy and hogging of an area in real-time
- The IR sensor prototype achieved 80% occupancy detection accuracy
- Work published in the International Workshop on Internet of Things towards Applications, ACM Sensys 2015

Student Developer

Google Summer of Code 2015

May - August 2015

Organization: Pidgin, Finch and libpurple

- Reversed engineered and implemented Google+ Hangouts protocol for libpurple 3.0
- Protocol to be merged in libpurple3 (currently in development)

Software Development Intern

Pyoopil Educational Technologies

June - July 2014

• Implemented 2 out of 5 REST modules for the Pyoopil Dynamic Learning Environment backend API engine; backend engine implemented in CakePHP and MySQL

Organizer

ingeNUity'14, NIIT University

Dec 2013 - March 2014

- Served as one of the members of the organization team for NIIT University's techno-cultural fest
- · Responsibilities included organization of the fest, sponsorship and marketing
- Lead the technical team which was responsible for the fest website and digital creatives

Publications

"Real-time Detection of Seat Occupancy & Hogging" by Nguyen Huy Hoang Huy, Nakul Gulati, Lee Youngki and Rajesh Krishna Balan, International Workshop on Internet of Things towards Applications, ACM Sensys 2015

Projects and Skills

Skills: C, Python, Java, PHP, SQL, JavaScript, HTML/CSS, GNU/Linux

- **Sentiment Analysis**: Predicting polarity (positive/negative) of textual data using maximum likelihood approach
- **Graph Engine**: Engine to store graph like data in relational schema; provides API to generate first-level entity association graphs
- Location Based Customization (Android app): Customizes phone settings (Wi-Fi, Bluetooth, Data) based on user's location; setting groups created by user
- **Connect Four Al Bot**: Implemented Minimax algorithm in Java to play the game of Connect Four; the algorithm determines optimum move by 'looking' four moves ahead
- **War Robot**: Arduino based, remote controlled (using Android app) robot with a spinning blade as primary weapon

Education

- NIIT University, B.Tech Computer Science and Engineering, July 2012 July 2016
- **Highlighted coursework:** Data Structures, Algorithms, Data Mining, Artificial Neural Networks, Web Intelligence and Algorithms, Natural Language Processing, Computational Geometry and its Applications, Operating Systems, Computer Architecture, Databases, Computer Networks, Discrete Mathematics and Software Engineering