**Deb Banerji**

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**Education**

**Georgia Institute of Technology**, Atlanta, GA **August 2015 - Present**

* Bachelor of Science in Computer Science - GPA: 4.00/4.00 Expected Graduation: May 2019

**SKILLs Languages:** C, C++, C#, Java, Python, Assembly, HTML, CSS, JavaScript, Typescript, SQL

**OS:** Linux, Windows, macOS

**Technology:** Android, Git, Maven, Arduino, Raspberry Pi, Unity, Bash, Beautiful Soup, Spring, Flask, Node.js, Express, MongoDB, Solr, Firebase, Angular, Bootstrap

**EXPERIENCE**

**Teaching Assistant** - *Georgia Institute of Technology* **August 2016 - Present**

* **Data Structures and Algorithms** - *Java*
* Designs and grades exams for class of over 500 students
* Designs, grades homework assignments, writing unit tests for grading submissions - *Java*
* Teaches weekly 90 minute recitations, covering material taught in the class
* Designs practice assignments to help students prepare for exams
* Holds 3 hours of office hours weekly, answering questions and helping students with classwork

**Software Engineering Intern - Site Team** - *NCR Corporation* **May 2017 – August 2017**

* Developed site service with 6 other engineers in an agile development environment
* Implemented RESTful API endpoints for site service - *Java, Spring*
* Wrote code for testing, querying, saving data to Solr database - *Java, Spring, Solr*
* Wrote behavior driven tests to cover code functionality - *Java, Spring, Cucumber*

**Software Engineering Intern** - *Yobi Technologies* **March – August 2015, June – August 2016**

* **Extreme weather prediction tool** - for use by central government in northeast India to issue flood warnings to residents - used in 4 states with combined populations of over 20 million
* Implemented tool to map predictions from global climate models to flood prone locations and send SMS alerts to residents on a per location basis - *Flask, JavaScript, Python*
* Wrote scripts to periodically update weather data in the database and compare actual data from weather stations to predictions in order to analyze forecast success rates *- Python*
* Built Android application with GPS integration to streamline installation of weather stations by generating weather station configuration and location data and sending it to a server - *Java*
* **Quadcopter for surveying agricultural land** - for use by the India office of Columbia University Water Center - currently in use in Haryana, India
* Built Android application to control quadcopter through either direct signals or GPS coordinates - *Java*
* Wrote controller software for quadcopter to follow GPS coordinates, log flight data - *C++, Arduino*
* Worked with team of 6 on frame to reduce cost of hardware by 30%

**Undergraduate Researcher** -*Georgia Institute of Technology* **January – May 2016**

* **Simulator to calculate power consumption of mobile device RAM**
* Developed simulator to test memory management algorithm - *Python*
* Implemented system to simulate memory with multiple sections - *Python*

**PROJECTS AND COMPETITIONS**

**Google Games ATL 2017 programming competition** - Winning Team

* Won competitive programming, puzzle solving competition

**‘Mapingo’ - Location based order tracking application** - Runner Up, HackEmory 2017

* Built Android application for submission of food orders and tracking of users using GPS - *Java*
* Created web interface for setting up points of sale, tracking orders and estimating time of arrival based on location and movement speed of users - *Angular, JavaScript*

**‘Memento’- Image compression algorithm** - Winner, Best Indoor Hack, HackGSU 2017

* Implemented algorithm for separation of text from images for more efficient storage - *Python, OpenCV*
* Built web interface for uploading, downloading, compressing and decompressing images - *Angular*

**‘Edu-Bae’ - Customized test generation algorithm** - Third Place Winner, Georgia Tech Appathon 2016

* Implemented algorithm for custom generation of exams for individual students - *JavaScript*
* Built web interface for entering student data, creating questions, generating exams - *Angular, JavaScript*

**‘WingBuddy’ - Home surveillance, automation system** - Winner, HackEmory 2016

* Programmed Arduino to interpret sensor data, log room status to server and communicate with Android application over network - *C++*
* Programmed Raspberry Pi to automatically play music on speaker system based on sensor data - *Python*
* Built Android application to view live feed from sensors, connect with other users in network - *Java*

**‘CS2’ - Community Service Search Application** - Runner Up, Georgia Tech Community Service Hackathon 2016

* Built Android application with GPS and map integration to help users find and organize community service events in their area - *Java*

**‘Labyrinth’- Multiplayer maze game** - Finalist, SwampHacks 2016

* Wrote game logic for, designed three dimensional environments for multiplayer game - *C#, Unity*

**‘Teeny Chat’ - Social network with profanity tracker** - Winner, HackGTeeny2015

* Created routes on server to handle user requests, analyze comments for profanity - *JavaScript, Node.js*
* Designed front-end user interface with chat functionality, Facebook login integration - *JavaScript*

**‘Syncloud’ - Synchronized audio streaming application** - Runner-Up, Georgia Tech Appathon 2015

* Implemented RESTful API and Android application for streaming synchronized audio to multiple users, handling user requests to add tracks to queue - *Java, Node.js, SoundCloud API*

**LEADERSHIP AND INVOLVEMENT**

**Organizer, Competitor** -*World Cube Association* **February 2014 - Present**

* Nationally ranked Rubik’s Cube speed solver
* World Cube Association competition organizer - organized multiple competitions with over 100 competitors