Deb Banerji

debkbanerji.com
github.com/debkbanerji
linkedin.com/in/deb-banerji
dbanerji3@gatech.edu
(470) 334-0577

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*

'CS^2' - 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, HackGTeeny 2015

- 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