

# Tanya Balaraju

## Education

Rutgers University > September 2014 - May 2018

**B.S. Computer Science**, interest in Cognitive Science  
**Honors Program** and **Phi Beta Kappa** > GPA: **3.77**

## Coursework

**Undergrad:** Algorithms, Databases, Systems Programming, Distributed Systems, Cryptography, Cognitive Science Concepts, Applying Cognitive Science

**Grad:** Artificial Intelligence, Brain-Inspired Computing, Natural Language Processing, Internet Services

## Leadership/Experience

[datadoghq.com](https://datadoghq.com) > Summer 2018 (hackNY Fellowship)

### Datadog > Software Engineering Intern

- > Modify components in **React** frontend and endpoints in **Python** backend to display aggregate usage summaries
- > Create **PostgreSQL** DB migrations and use **SQLAlchemy ORM** for new payment workflow affecting **all users**
- > Write and run unit tests in Python along with feature flags for all new features; implement A/B testing for new workflow

[pedul.com](https://pedul.com) > Summer 2017 (Contract)

### PeduL > Backend Web Developer

- > Work with team to design sitemap, UX flows, and ER diagrams for a higher education crowdfunding startup
- > Implement backend flows supporting payments, user auth, OAuth, and email verification in **Python/Flask** using MongoDB
- > Deploy on **Apache** HTTP server on **Ubuntu** Linux cloud host; integrate front end using Jinja2; configure unit and load testing

[cs.rutgers.edu/resources/instructional-lab](https://cs.rutgers.edu/resources/instructional-lab) > Fall 2017

### Department of Computer Science > iLab Assistant

- > Administrate Rutgers computing resource cluster running CentOS 7 for **thousands** of undergrads, graduates, and faculty
- > Tutor undergraduates in computer science coursework

[usacs.rutgers.edu](https://usacs.rutgers.edu) > April 2016 - April 2018

### Rutgers USACS > Community Director

- > Organized events to **reform** and **expand** CS student org
- > Led online campaigns to increase exposure by over **100%**
- > Launched initiative to increase community presence of minority groups by **200%-500%**, particularly **women in tech**

[hackru.org](https://hackru.org) > Fall 2017 - Spring 2018

### HackRU > Director, Volunteers / Hacker Experience

- > Recruit, guide, and lead team of **~50 volunteers** for HackRU
- > Ensure smooth experience for **several hundred developers**
- > Contact experienced developers to serve as mentors to attendees during the event, **encouraging project completion**
- > Prior **Organizer** on Day-Of and Hacker Experience teams

**Github** [tanya](https://github.com/tanya)  
**Linkedin** [/in/tanya-b](https://in.linkedin.com/in/tanya-b)  
**Website** [tanya.github.io](https://tanya.github.io)  
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## Skills

**Python, Java**, C, Swift/iOS, C#, HTML/CSS, JS (React)  
Bash, Git, Flask, Apache, MySQL, PostgreSQL, MongoDB  
Linux (RHEL, DEB), Docker, Kubernetes, Nomad

## Awards

**hackNY Fellowship:** Summer 2018

**Best Hack Design:** hackNY Spring 2016

**Best Mobile App:** CS336 Databases Fall 2016

**Scholarships:** Henry Rutgers, Rutgers Trustee

**First-Year Leaders Fellow:** Rutgers, Spring '15

**Dean's List:** Fall '14, '16, '17; Spring '15, '16, '17, '18

## Projects

[github.com/tanya/Hawk](https://github.com/tanya/Hawk) > Fall 2016

### Hawk: Crowdsourced Safety App

- > Applied **MVC** to create iOS app that included data persistence, networking, and location services in **Swift**
- > Built **Python/Flask** backend that used SQLAlchemy to interact with **MySQL** database on Amazon Web Services
- > Used Alamofire to connect HTTP requests to REST API with user interface to create a smooth user experience

[github.com/tanya/YUGE](https://github.com/tanya/YUGE) > Spring 2016

### Yuge: Tetris / Candy Crush Mobile Game

- > Implemented design in Swift, won **Best Hack Design**
- > Collaborated with two teammates at hackNY to blend external mechanics into politically-themed iOS game
- > Designed an elegant 8-bit style UI using various tools

Spring 2017 - Spring 2018

### Graduate-Level Coursework

- > Implemented Simulated Annealing and **space-optimized A\*** search algo in **Java** for Traveling Salesman Problem
- > Compared production-grade container deployment frameworks: Kubernetes, Nomad, Swarm, Mesos/Marathon
- > Integrated time-based Spiking Neural Network with Convolutional Neural Network to classify written digits
- > Implemented **Natural Language Proc.** in **Python** using bigram-based feature augmentation on TFIDF vectors

[github.com/tanya/Multithreaded-Bank](https://github.com/tanya/Multithreaded-Bank) > Fall 2015

### Multithreaded Bank Server

- > Implemented low-level solution to classic multithreaded producer-consumer problem in C on UNIX-based system
- > Built client-side scripts equipped with dynamically-sized buffers and debugged server-side thread management
- > Utilized mutual exclusion locks and thread coordination