

# Brandon Davis

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## Education

### University of North Carolina at Chapel Hill

Expected May 2017

- Bachelor of Science in Computer Science, GPA 3.36

## Leadership Experience

- UNC Computer Science Club Co-President 2016 – 2017
- HackNC Director of Development – build website and registration system 2016 – 2017

## Relevant Coursework

- Computer Organization and Design, Software Design (Java), Files and Databases, Advanced Web Development, Algorithms and Analysis, Computer Graphics, Digital Logic (Architecture)
- Calculus 1 – 3, Discrete Mathematics, Linear Algebra

## Work Experience

### Cisco Systems, Inc (RTP, NC)

May 2016 – August 2016

#### Software Engineer, Intern

- Developed internal python API to enable my team to communicate with Cisco's bug tracking system
- Extended team's Django app with new endpoints and added authentication / Swagger documentation
- Designed python scripts to catalog and generate checksums for ~100TB of cisco firmware for customers
- Built command-line utility to maintain bug data caches, enabling faster lookup times for our applications
- Designed BASH backup scripts for my team's production database, ensuring recoverability of our data

### SQL Sentry, LLC (Charlotte, NC)

June 2015 – March 2016

#### QA Specialist, Intern

- Created robust test suite in Ranorex for automating nightly production web application testing, enabling faster detection of problems in our web services. Included daily email reports to project team members.
- Developed internal tools in C# to extend MS Team Foundation Server task management, particularly to catalog new test cases and include them in future regression tests.

### UNC Information Technology Services (Chapel Hill, NC)

November 2014 – May 2015

#### Walk-in Technician

- Diagnosed and repaired software issues on OS X and Windows
- Recovered and backed up client data using department's custom scripts or advanced Linux tools
- Communicated 1:1 with students and faculty to troubleshoot technology and resolve client issues

## Projects

### OpenCV BitCamp Hackathon Project (C++/Python)

March 2016

- Two-member team project for BitCamp at UMD created in 36 hours
- Built a physical "joystick" to be tracked by a single web-cam out of miscellaneous art supplies
- Learned computer vision (OpenCV) to construct a 3D orientation matrix from 2D points (pose transform)
- Used this model as input for an OpenGL flight simulator game created by my teammate

### Spotify Predictive Playlists (Python/MySQL/Flask/HTML/JavaScript)

October 2015 – December 2016

- Wrote a web crawler and used Spotify API to fetch data and populate ~300,000 song/playlist records
- Designed a database schema to hold these records, and used proper indexing to optimize my queries
- Designed SQL queries for analyzing trends and predicting new content based on user preferences
- Implemented a REST API using Python/Flask and a web front end for interacting with the data

### HackNC Mobile Application (HTML/CSS/JavaScript/Python/Flask)

August 2015 – October 2015

- Helped develop the first mobile event application for UNC's fall hackathon.
- Wrote dynamic schedule for updating and adding events ad-hoc
- Helped create a system to link students with mentors, handling concurrency and backend services

## Skills

**Languages** Python, C#, C++, Java, SQL, JavaScript, BASH, HTML/CSS

**Other Technologies** (Debian-based) Linux, Git, SQL Server/MySQL/PostgreSQL, Ranorex