

Brijesh Rakholia



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Work Experience

Stark & Wayne, LLC · Cloud Engineering Intern · Buffalo, NY

June 2017 – Present

- Currently working with cloud native technologies such as [Cloud Foundry](#), [Bosh](#), and [Concourse](#). More details about the project will be updated at <http://brijeshrakholia.me> soon.

Tutr · Co-founder, Backend Engineer · Buffalo, NY

Aug 2016 – Dec 2016

- Tutr is a web application that provides on-demand tutoring service for college students, just like Uber.
- Built the Tutr backend infrastructure using [nodejs](#), [socket.io](#), [mongodb](#), and [auth0](#).
- Developed a **continuous integration** deployment bot for the website build cycle using [Slack API](#).

Viacom · Software Engineering Intern · New York, NY

May 2016 – Aug 2016

- Worked closely with the Video Player Team to develop live-streaming support for MTV Apple TV app using [tvOS](#) and [TVML](#). Launched the feature of the Video Music Awards 2016.
- Developed an internal tool using [d3.js](#) to visualize [Git](#) repositories in order to analyze software development practices.

blue Systems Research Group · Systems Researcher · Buffalo, NY

Feb 2015 – May 2017

- Worked towards quantifying and prioritizing smartphone Quality of Experience (QoE).
- Developed an offline-processing pipeline to analyze on-screen user interactions and events such as touch events, progress bars, screen freezing, etc.
- It combines low-level Android Logging ([android platform](#) instrumentation) and analysis to measure the length of time user waits for apps to complete certain actions.

University at Buffalo · Computer Science TA · Buffalo, NY

Aug 2016 – May 2017

- **CSE421/521 : Operating Systems (OS/161 by Harvard)**
 - Held office hours (8 – 10 hrs/week), organized and hosted multiple 24 hour hacknights to help students debug their virtual memory implementation.
- **CSE250 : Data Structures in C++**
 - Held office hours (5 – 10 hrs/week), and helped students with programming assignments.
- **CSE199 : How the Internet Works**
 - Developed tools & infrastructure needed for the course. Interacted with students one-on-one during the class.
- **CSE115 : Intro to Computer Science**
 - Held office hours (3 hrs/week), helped students with programming assignments, and taught recitations.

Software Projects

(more at github.com/brijeshrakholia)

BridgeOS - An Instructional Operating System | [C](#)

- **Implemented synchronization primitives** such as mutex locks, conditional variables, and reader/writer locks.
- Designed and **implemented** the entire **file system** syscall interface (read, write, close, lseek, dup2, chdir), and **process support** (exec, fork, waitpid) so that user-programs can be executed by launching a simple shell.
- Carefully designed and successfully **implemented virtual memory**, including address translation, TLB management, page replacement, and swapping – without any memory leaks.

SpinBot (UBHacking Finalist) | [Arduino](#), [Python](#)

Built a persistence of vision display for Slack from recycled 5.25" optical drives, LEDs, and Arduinos; capable of running in live `message ticker` via a custom Slack integration using Slack API.

3D Hologram Generator | [Unity](#)

Built a Hologram Generator using a screen and acrylic sheet. Wrote a music visualizer using unity to project that visualization over the hologram generator.

Robotic Arm (tiny.cc/roboticarm) | [JavaScript](#)

Built a robotic arm to follow the movements of my hands in 3D space using [leap motion](#) and [Arduino](#).

Muvis (muvis.herokuapp.com) | [JavaScript](#)

Muvis is a music visualizer using [d3.js](#) and [paper.js](#) developed at Spotify Music Hackathon

Silver | [JavaScript](#), [Python](#)

Wrote a slack bot and a **web crawler** to book private rooms every midnight at University at Buffalo Libraries.

Network.js | [JavaScript](#)

Developed a visualization using js [canvas](#) portraying a network. It is basically a simpler version of [particle.js](#).

Education

University at Buffalo

B.S Computer Science

Expected December 2017

Relevant Courses

OS, Networking, Distributed Systems, Database Concepts, Robotic Algorithms, Software Engineering.