Brijesh Rakholia

@ brijeshr@buffalo.edu
📞 +1 (716)-939-7102
🔍 brijeshrakholia.me
brijeshrakholia
in brijeshrakholia

Work Experience

Viacom · Software Engineering Intern · New York   Summer 2016

– Developed a tool using d3.js to visualize git repositories which can be used to improvise software development practices.
– Worked closely with the Video Player Team and developed live-stream support for the MTV Apple TV App which will be used during MTV Video Music Awards.
– Resolved all the bug tickets during QA, and stage releases of live-stream feature push.

PhoneLab · Systems Researcher · Buffalo, NY   Feb 2015 - Present

phone-lab.org

• **Progresso : Debugging User-Perceived Latency in Android Smartphones**
  with Scott Hasaeley, Nick DiRienzo, and Geoffrey Challen

  – Progresso is a system designed to use determinate and indeterminate progress bars to study user-facing latency on android smartphones.
  – It combines low-level Android Logging (platform instrumentation) and analysis to measure the length of time user waits for apps to complete certain actions.
  – Performed a preliminary analysis of approximately 3 days of Progresso data from 197 users interacting with 453 apps, and identified poor QoUI (Quality of User Interface) problems such as excessive waiting, lagging, and freezing.

University at Buffalo · Undergraduate Teaching Assistant · Buffalo, NY   Fall 2016

• **CSE199 : How Internet Works**
  – Hold office hours every week.
  – Record videos to make complex concepts easier to understand.
  – Teach recitations once a week.

• **CSE250 : Data Structures in C++**
  – Hold office hours every week.
  – Write tests for coding assignments.
  – Teach recitations once a week.

Selected Projects   *(more at github.com/brijeshrakholia)*

BridgeOS - An Instructional Operating System | C   Spring 2016

Developed BridgeOS by implementing larger OS subsystems (three subsystems mentioned below) from scratch onto previously developed instructional OS/161 kernel at Harvard.

- **Synchronization Primitives**
  Implemented synchronization primitives such as mutex locks, conditional variables, and reader/writer locks.
- **File System Calls and Process Support**
  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.
- **Virtual Memory (top 1% out of 140 students)**
  Carefully designed and successfully implemented virtual memory, including address translation, TLB management, page replacement, and swapping – without any memory leaks.

For more info please visit *ops-class.org* , and if you need access to the codebase then please email me.

Muvis *(muvis.herokuapp.com)* **| JavaScript**

Muvis is a music visualizer usign d3.js developed at Spotify Music Hackathon.

Robotic Arm *(tiny.cc/roboticarm)* **| JavaScript**

Designed a robotic arm to follow the movements of my hands in 3D space using leap motion and arduino.

Skills

Programming Languages

Over 7000 lines	Over 5000 lines	Over 500 lines
- C	- Java	- JavaScript
	- C++	- Python

Others

Vim, Atom, Eclipse, Xcode, Git, and familiar with many others.

Education

University at Buffalo
B.S Computer Science
Expected May 2017

Relevant Courses

Operating Systems, Database Concepts, Robotic Algorithms, Software Engineering, Data Structures and Algorithms, Linear Algebra, and many more.

Brijesh Rakholia

@ brijeshr@buffalo.edu
📞 +1 (716)-939-7102
🔍 brijeshrakholia.me
⌨ brijeshrakholia
in brijeshrakholia

Work Experience

Viacom · Software Engineering Intern · New York   Summer 2016
 – Developed an internal tool using d3.js to visualize git repositories which can be used to improvise software development practices.
 – Worked closely with the Video Player Team and developed live-stream support for the MTV Apple TV App which will be used during MTV Video Music Awards.
 – Resolved all the bug tickets during QA, and stage releases.

PhoneLab · Systems Researcher · Buffalo, NY   Feb 2015 - Present
 • **Progresso : Debugging User-Perceived Latency in Android Smartphones**
   with Scott Hasaeley, Nick DiRienzo, and Geoffrey Challen

   – Progresso is a system designed to use determinate and indeterminate progress bars to study user-facing latency on android smartphones.
   – It combines low-level Android Logging (platform instrumentation) and analysis to measure the length of time user waits for apps to complete certain actions.
   – Performed a preliminary analysis of approximately 3 days of Progresso data from 197 users interacting with 453 apps, and identified poor QoUI (Quality of User Interface) problems such as excessive waiting, lagging, and freezing.

University at Buffalo · Undergraduate Teaching Assistant · Buffalo, NY   Fall 2016
 • **CSE199 : How Internet Works**   • **CSE250 : Data Structures in C++**
   – Hold office hours every week.   – Hold office hours every week.
   – Record videos to make complex   – Write tests for coding assignments.
     concepts easier to understand.   – Teach recitations once a week.
   – Teach recitations once a week.

Selected Projects   *(more at github.com/brijeshrakholia)*

BridgeOS - An Instructional Operating System | C   Spring 2016
Developed BridgeOS by implementing larger OS subsystems (three subsystems mentioned below) from scratch onto previously developed instructional OS/161 kernel at Harvard.
   • **Synchronization Primitives**
     Implemented synchronization primitives such as mutex locks, conditional variables, and reader/writer locks.
   • **File System Calls and Process Support**
     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.
   • **Virtual Memory (top 1% out of 140 students)**
     Carefully designed and successfully implemented virtual memory, including address translation, TLB management, page replacement, and swapping – without any memory leaks.

For more info please visit *ops-class.org* , and if you need access to the codebase then please email me.

Muvis *(muvis.herokuapp.com)* **| JavaScript, HTML, CSS**   **Robotic Arm** *(tiny.cc/roboticarm)* **| JavaScript**
Muvis is a music visualizer usign d3.js developed at Spotify   Designed a robotic arm to follow the movements of my
Music Hackathon   hands in 3D space using leap motion and arduino.

Skills   ## Education

Programming Languages   ### University at Buffalo
Over 7000 lines   Over 5000 lines   Over 500 lines   B.S Computer Science
- C   - Java   - JavaScript   Expected May 2017
                     - C++   - Python
                                                                   ### Relevant Courses
Others   Operating Systems, Database Concepts, Robotic
Vim, Atom, Eclipse, Xcode, Git, and familiar with   Algorithms, Software Engineering, Data Structures
many others.   and Algorithms, Linear Algebra, and many more.

Brijesh **Rakholia**

📞 +1 (716)-939-7102
@ brijeshr@buffalo.edu

🔍 www.brijeshrakholia.com
📍 495-D Red Jacket, University at Buffalo
Buffalo – New York - 14261

work **experience**

PhoneLab
Systems Researcher
Feb 2015 - Present
phone-lab.org

Progresso : Debugging User-Perceived Latency in Android Smartphones
with Scott Hasaeley, Nick DiRienzo, and Geoffrey Challen
– Progresso is a system designed to use determinate and indeterminate progress bars to study user-facing latency on smartphones.
– It combines low-level Android Logging (platform instrumentation) and analysis to measure the length of time user waits for apps to complete certain actions.
– Performed a preliminary analysis of approximately 3 days of Progresso data from 197 users interacting with 453 Android apps collected using the PhoneLab Smartphone Testbed, and identified poor QoUI (Quality of User Interface) problems such as excessive waiting, lagging, and freezing.

Project iCode
Workshop Organizer
Summer 2015
github.com/brijeshrakholia

iCode : Introductory App Development Course
with Parth Mehta (Princeton University), and Darvish Kamalia (USC)
– iCode is a course designed to teach basic app development to high school students.
– Developed an online diary, used it as an example to teach students how real-world web applications are written.
– Taught 40+ high school (SNK School, Gujarat, India) students app development using technologies such as Bottle, HTML, CSS, Python & JSON.

personal **projects** *github.com/brijeshrakholia*

HiSpy (HackPrinceton 2015)
– Collaborated with two students to develop an Android app with Python backend
– A game using GPS that lets people play iSpy over their Android phone in public
– Technologies used : Android, MongoDB, Flask & JSON.

Robotic Arm in Free Space (Summer 2014)
– Designed a robotic arm which can follow shadows of hand in 3D space.
– Technologies used: Leap Motion and Arduino
– *Video : tiny.cc/roboticarm*

potential **skills**

Languages
C++	HTML
Java	CSS
Python	

Technologies
Android	Git	Raspberry Pi
Flask	JSON	Leap Motion
Bottle	Arduino	

education

University at Buffalo
B.S Computer Science
Expected May 2017

Relevant Courses
Intro to Computer Science I & II, Discrete Mathematics, Data Structures, Digital Systems, Programming Languages, Database Concepts
Fall 2015 – Linear Algebra, Algorithms, Computer Organization

leadership

UB ACM   *ubacm.org*
– Member of UB ACM since 2013
– Update ubacm.org on a regular basis
– Helping organize UB Hacking 2015

FIRST   *usfirst.org*
– Mentored team India at FIRST Championships, St. Louis 2013
– Lead the robot game at Open European Championship (OEC 2012) –Mannheim, Germany

honors **& awards**

Dean's List – University at Buffalo
– Dean's List (those who achieve a GPA of 3.6 or above)

World Robot Olympiad (WRO 2012)
– Top 20 out of 125 teams globally

Krushi Award – by Narendra Modi
– Felicitated by Narendra Modi after winning Champions Trophy 2nd Place at OEC 2012 – Mannheim, Germany