

# Khushman J. Patel

Atlanta, Georgia, USA

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## Experience

### Georgia Institute of Technology

Atlanta, Georgia

#### GRADUATE RESEARCH ASSISTANT

May. 2019 - Present

- Developing and maintaining **cloud scale applications** for the Research Network Operations Center(RNOC), GeorgiaTech's network research lab.
- **Scaled an Openshift Container Platform** cloud, a docker based cloud for running micro-services open for GeorgiaTech members.
- Extended the Smart Sea Level Sensors project, and currently **implementing Geo-resiliency using multiple cloud providers**.
- **Maintained ~100% uptime** of the cloud through multiple points of failure including power outages and other hardware failures.
- Ensured security and resiliency of the cloud while publicly accessible and under external attack.

### Housing.com

Mumbai, India

#### TECH LEAD, VIRTUAL REALITY

Mar. 2015 - Sep. 2017

- Real Estate VR + Build Automation
  - **Engineered Housing's VR product from scratch**, designed intensive usability testing programs; experimented with every facet of design and the tech stack to deliver a state-of-the-art result for the Samsung Gear VR.
  - Drove scalable production through a build system, seamlessly connecting the browser to Unity, cutting down delivery times from months to hours. Developed with a **VR team I setup and managed**.
  - Persevered to make the product a commercial success, modifying it after **identifying market needs and tailoring it** for Indian real estate.
- **Routing System & Polygon Crawler**
  - Built an in-house routing system for Housing's map interface with features like **multi-transit isoline generation**. Scaled to thousands of concurrent users in production after driving traffic through a **conversion rate of 60%**.
  - Designed an efficient **polygon and fid/address crawler for cities from Google's Mapmaker** which automated the city addition process.

### Cisco Systems

Pune, India

#### SOFTWARE ENGINEER & INTERN

Jan. 2013 - Dec. 2014

- Contributed to core nodes in the LTE architecture used by major US telecom carriers. Wrote **high-scale, low-level C code**, following stellar software engineering practices including AGILE, peer reviews and version control.
- Delivered a **graphical network debugger** as a solo project which **cut down network debugging times x2**.

## Education

### GeorgiaTech

Atlanta, Georgia, USA

#### MS IN COMPUTER SCIENCE — 3.75 GPA

Aug. 2018 - Present

- Developing for **Mixed Reality(XR)**, specializing under Human Computer Interaction.
- Developing a **WebXR launcher** with Prof. Blair, Director@Mozilla, targeted at AR displays which can sense 3D surfaces.
- Writing a paper on the surprisingly **accepting VRChat community**, targeted to be published in **ACM CSCW '21**.

### IIIT Allahabad

Allahabad, UP, India

#### BACHELOR OF TECHNOLOGY IN INFORMATION TECHNOLOGY — GRADUATED TOP 1% OF THE CLASS

Jul. 2009 - Jun. 2013

- Founding secretary of the technical club, entrusted with the college network, and innovating new services.
- **Published** 'Patel, Khushman, et al. "**Lazy Wavelet Transform Based Steganography in Video**." Communication Systems and Network Technologies (CSNT), 2013 International Conference on. IEEE, 2013.'

## Fun stuff™

- Worked on an **interactive VR documentary with PBS** showcasing the failures of DNA evidence by walking you through an actual failed case.
- Poetry and stories — <http://blog.khushmanpatel.com>

## Skills

- Programming** Python, C, C++, QT, Unity3D C#, Shell + regex, Android Java, LaTeX, ffmpeg, NSIS, numpy, keras, Google Apps Script, Docker+s2i
- Web Tech.** RubyoR, Django, HTML5, nginx, PostgreSQL, PostGIS, pg-routing, JS, Aframe, AWS, Three.js, OpenShift Container Platform, Nagios
- Software Eng.** Agile development, Scrum, Git, Peer reviews, Pair programming, Waterfall, Remote productivity
- Leadership** Led a team of 5 to continuously innovate one of India's first VR products through an unstable startup environment.