

# Siddharth Singhai

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## EDUCATION

- Master of Science from Northeastern University – Game Science and Design (2023)
- Bachelor of Technology from Motilal Nehru National Institute of Technology – Computer Science and Engineering (2018)

## TECHNOLOGY AND TOOLS

Programming Languages	C++, C#, C, Java, Python, HTML, CSS, TypeScript
Development Technologies	IoT, 5G, VR, AR
Platforms and Frameworks	Angular, React, Elasticsearch, Unity, Unreal, Photon, iMotions
Databases	SQL, MongoDB, Redis, Cassandra
Tools	GitHub, Jira, Visual Studio, NetBeans

## WORK EXPERIENCE

### Lab Manager Intern – Immersive Media Lab, Northeastern University (Boston, MA) Jun 2022 – Dec 2022

- Implemented the mechanics and interactions for VR lab demos using Unity and Unreal Engine.
- Authored MetaHuman quickstart tutorials in Unreal engine for journalism students.
- Converted AutoCAD and Blender models into VR showcases in collaboration with the architecture department.
- Setup XR toolkit in Unity to support multiple VR devices for player interaction and traversal.
- Created tutorials for use by students and faculty for Unity and Unreal Engine development of 3D and VR projects.
- Conducted iMotions training workshops for students and faculty to facilitate biometric data collection and analysis.

### Software Engineer – Reliance Jio Infocom (Mumbai, India) Jul 2018 – Aug 2021

- Developed a user interface to facilitate user-management and deliver JSON configuration parameters to the Service Capability and Exposure Function (SCEF).
- Implemented a Redis database to modify inter-network device configuration details in real time.
- Developed the Platform External Gateway API to configure third-party IoT devices in a 5G network.
- Deployed an Elasticsearch solution to provide real time search and configuration of network devices nationwide.
- Constructed a scalable network stack with HTTP 2.0 support using a Vert.x client to handle up to four million transactions per second.

## ACADEMIC AND PERSONAL PROJECTS

### Modified VBO algorithm for Controller Placement Problem – Undergraduate Capstone project Mar 2018

- Theorized and developed a modified VBO algorithm for the Controller Placement Problem in Software Defined Networks.
- Benchmarked the performance against Jaya, Teaching-learning, and particle swarm algorithms.

### DEngine – Academic Project Mar 2023

- Developed a customizable game engine using the SDL2 library in C++.
- Built a dungeon crawler game using this engine where users can customize the themes and create their own maps.

### Centripetal – Academic Project Dec 2021

- Implemented a grapple focused, physics-based 2D platformer game in Unity.

### Wheatstone VR – Northeastern VR/XR Jam Project Sep 2023

- Built an interactive Wheatstone bridge circuit for the Meta Quest 2 using Unity.