

# Shubham Sharma

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## Skills

**Languages:** C/C++, Java, Python, JavaScript, Rust, SQL, Golang, WebAssembly

**Technologies & Tools:** AWS, Firebase, Node.js, GStreamer, WebRTC, Kubernetes, Docker, ReactJS, Android, d3.js, Flask, Redis, Power BI, Machine Learning

## Work Experience

**XtreamCompute, Canberra**

Feb 2024 - Present

### Software Engineer

- Enabled dynamic adjustments to streaming parameters (bitrate, FPS, resolution) using custom adaptive bitrate technology for cloud gaming product, enhancing it's streaming quality.
- Reduce the chances of incorrect reference times of frames by implementing a robust self correcting algorithm for frame data.
- Developed a customized GStreamer plugin in C compatible with rust server files to change the resolution of the stream for internal development team.
- Rust, GStreamer, Python, C, Docker, AWS

**College of Health and Medicine, ANU, Canberra**

Jul 2023 - Present

### Data Project Intern

- Successfully automated data collection pipelines for the College of Health and Medicine department, increasing data acquisition efficiency by 40%.
- Built data reports for the College of Health and Medicine, significantly reducing analysis time compared to manual Excel searches.
- Developed various python scripts to automate manual data collection, reducing manual data gathering time by 50%
- Python, Power BI, Beautiful Soup

## Education

**Australian National University, Canberra**

Feb 2023 - Present

Master of Computer Science (Computing)

**GPA: 6.42/7**

Relevant Coursework: Computer Vision, Machine Learning, Logic, Relational Databases, Discrete Maths, Android, Java, Software Engineering

**Guru Gobind Singh Indraprastha University, New Delhi**

Jul 2018 - Jun 2022

B.Tech in Computer Science and Engineering

**GPA: 9.68/10**

Relevant Coursework: Object Oriented Programming, Databases, Discrete Maths, Data Structures and Algorithms, Operating Systems, Computer Networks, Machine Learning, Data Mining, Advance Computer Networks

## Projects

- **Food Recipe Sharing App:** Built an android app which provides functionality such as login, authentication, storing and sharing food recipes. Implemented AVL tree for real-time storage of favorite recipes, with persistent storage in Firebase. Added real-time profile picture upload functionality and real time chat feature. Used Java, Firebase, JUnit4.
- **GStreamer Plugin:** Developed a custom GStreamer plugin to dynamically change the resolution of video playback on the screen, incorporating aspect ratio adjustments not available in existing plugins. Implemented without the use of any wrapper applications, utilizing in-built negotiation of capsfilter element capabilities. Used Rust, GStreamer, C.
- **Automated Image Captioning:** Implemented the "Show, Attend and Tell: Neural Image Caption Generation with Visual Attention" paper using a combination of CNN and LSTM. Used CNN for encoding and LSTM for decoding to generate captions from images, leveraging the MS-COCO dataset. Applied beam search to improve the accuracy and relevance of the generated captions. Used Python.

## Awards and Certificates

- **ANU Chancellor's International Scholarship:** Holder (50% Tuition Fee Reduction) (2023-2024)
- **Academic Excellence Award:** First Rank in bachelors.
- Udacity Deep learning Nanodegree certified (2020).
- Microsoft Technology Associate (2019)