



# Rajib Chandra Das

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## WORK EXPERIENCE

10/2022 – 31/05/2024 Hamburg, Germany

**SOFTWARE ENGINEER C++ SMARTCLIP EUROPE GMBH**

- experienced with **Digital Advertising** solution that handles 1.9 billion requests per day.
- implemented stricmp(case-insensitive string comparison) using **assembly x86\_64** with **SSE4.2** instructions, which outperforms currently available solution <https://linux.die.net/man/3/strncasecmp>, resulting 20% faster execution in the whole process.
- generated graphs for comparing and visualizing different implementations for benchmarking using **Python**
- experienced in monitoring tools i.e. **Prometheus, Grafana, Greylog**.
- worked on 25+ refactoring, improvement, feature and bug tickets mostly in **C++17**.
- wrote 50+ new unit tests (**Google Test**) for newly added implementations.

**Skills:** C, C++, C++17, STL, Python, Assembly, Prometheus, Grafana, Graylog, Digital Advertising, Jira, Git, Jenkins, Google Test, Debugging, Profiling, Makefile, Protocol Buffers, Docker, Linux(Ubuntu), Bash

30/09/2015 – 29/09/2018 Dhaka, Bangladesh

**SOFTWARE ENGINEER IPVISION CANADA INC**

- worked with Social Network solution, currently reached 5 million downloads (<https://bit.ly/4ajc9Rq>).
- designed and implemented Cross-Platform SDK for audio and video data processing.
- worked with conversion, mirroring, rotating, scaling, cropping for different raw audio, image and video data like **RGB24, RGB32, YUV-I420, YUV-NV12, YUV-NV21, YUY2, BMP, PCM, PNG**.
- worked with encoder and decoder like **H.264, G.729, Opus**.
- implemented Bi-Lateral filter, Gaussian filter based on recently published paper to get smoother output during video call/live-stream.
- experienced in **Jenkins, OwnCloud** to perform automated release and distribute files for all platforms.
- optimized solutions using raw **assembly** for **arm32** and **arm64** platform with NEON extension, resulting 16 times faster execution time.

**Skills:** C, C++, C++11, Objective-C, STL, BOOST, Multithreading, assembly, Jenkins, Owncloud, FFMPEG, VideoCodec, AudioCodec, Docker, Linux(Ubuntu), MacOS, Windows

30/04/2014 – 29/09/2015 Dhaka, Bangladesh

**SOFTWARE ENGINEER EYEBALL NETWORKS**

- designed and implemented real time transcoding server for video data i.e. **H264** and **VP8**
- implemented signaling for audio/video call among **SIP** and **WebRTC** client.
- integrated **OpenH264** Encoder & Decoder based on standard protocol, RTP payload construction follows **rfc6184**.
- integrated **VP8** Encoder & Decoder based on **rfc6386**.
- integrated **MS-RTP** Protocol to communicate with Lync 2013.
- added Google Test Framework for unit testing.
- solved 50+ bugs and memory leaks, experienced in debugging tools i.e. **Valgrind, GDB**.

**Skills:** C, C++, SIP, WebRTC, Socket Programming, IPC, MS-RTP, VP8, H264, VoIP, TCP, UDP, Google Test, Valgrind, Debugging, Profiling.

## EDUCATION AND TRAINING

30/09/2018 – CURRENT Kiel, Germany

**MASTER IN COMPUTER SCIENCE** Christian-Albrecht University of Kiel

**Website** <https://www.uni-kiel.de/de/>

31/01/2010 – 27/02/2014 Sylhet, Bangladesh

**BACHELOR IN COMPUTER SCIENCE** Shahjalal University of Science and Technology

**Website** <https://www.sust.edu/> | **Final grade** CGPA - 3.52 out of 4.00 |

**Thesis** Ranking the Locations and Predicting Future Crime Occurrence by Retrieving News from Different Bangla Online Newspapers.