



Rajib Chandra Das

Nationality: Bangladeshi **Date of birth:** 04/10/1992

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WORK EXPERIENCE

Software Engineer C++

smartclip Europe GmbH [10/2022 – 31/05/2024]

City: Hamburg | Country: Germany

- 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, Python, Assembly, Prometheus, Grafana, Graylog, Digital Advertising, Jira, Git, Jenkins, Google Test, GNU Debugger, Makefile, Protocol Buffers, Docker, Linux, Bash

Full Stack Developer (Part-time)

Wobe-systems GmbH [30/06/2019 – 09/2022]

City: Kiel | Country: Germany

- played a key role in design, development and improvement of web-based applications.
- worked with 4 different highly functional web applications, implemented 50+ features.
- implemented 100+ APIs(**REST, GraphQL**) interacting with databases i.e. **PostgreSQL, MongoDB**.
- worked with various industry-adopted technologies and frameworks i.e. **Bootstrap, Flask, jQuery, Prisma etc**
- worked with projects based on **Microservice** architecture.
- wrote 200+ unit tests to verify the back-end functionalities.
- documented 100% of technical specifications and dependencies of applications.
- designed recursive data structures to analyze, process through different services and visualize into the workspace.

Skills: JavaScript, TypeScript, Python, Go, Node.js, Express.js, Vue.js, REST, GraphQL, MySQL, PostgreSQL, MongoDB, Prisma, Jira, Git, Microservice, Docker, Kubernetes

Teaching Assistant

Christian-Albrecht University of Kiel [31/03/2019 – 30/03/2020]

City: Kiel | Country: Germany

- Assisted professor in "**Advanced Programming**" course with classroom instruction, assignments preparation, exams and record keeping.
- Facilitated both in-person and online discussion sections to help students understand course material and assignments.
- Mentored and tutored students on weekly lab sessions.
- Graded assignments, exam papers and provided detailed feedback to students.

Skills: Java, Haskell, Prolog

Software Engineer

IPvision Canada Inc [30/09/2015 – 29/09/2018]

City: Dhaka | Country: Bangladesh

- 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, Java, Objective-C, assembly, Android Development, Android Studio, iOS Development, XCode, Jenkins, Owncloud, FFMPEG, VideoCodec, AudioCodec, Docker**

Software Engineer

Eyeball Networks [30/04/2014 – 29/09/2015]

City: Dhaka | Country: Bangladesh

- 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 **rfc 6184**.
- 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, MS-RTP, VP8, H264, VoIP, TCP/IP, Google Test, Valgrind, GDB**.

EDUCATION AND TRAINING

Master in Computer Science

Christian-Albrecht University of Kiel [30/09/2018 – Current]

City: Kiel | Country: Germany | Website: <https://www.uni-kiel.de/de/>

Bachelor in Computer Science

Shahjalal University of Science and Technology [31/01/2010 – 27/02/2014]

City: Sylhet | Country: Bangladesh | 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.

SELF DEVELOPMENT

Programming Activity

Honorable Place in ICPC Dhaka Regional Contest, 2013 (Team: **SUST_Unreal**).

Honorable Place in SUST SIUPC, 2011 (Team: **SUST_Untitled**).

Green Coder in Codeforces (Current Rating: 1407, ID: **RajibTheKing**).

Green Coder in Topcoder (Current Rating: 956, ID: **RajibTheKing**).

Solved more than 1000 algorithmic problems on UVA, TJU, LightOJ, Leetcode.