

## Srinivas Thomala

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### EDUCATION

**University of Florida** 08-10-2019 – 05-01-2021 Master of Science, Computer Science.

Computer Networking, Distributed Operating Systems, Analysis of Algorithms, Data Structures, Database System Implementation.

**National Institute of Technology Karnataka** 08-01-2013 – 05-01-2017 Bachelors, Electronics & Communications Engineering.

### EXPERIENCE

**Software Engineer** 06-21-2021 – Present

**Bloomberg L.P. New York USA**

- Executed KTLO and quality-of-life bug fixes in Python and C++; enhanced UI with React, enriching user experience and reducing client impacts by 50%.
- Engineered logging enhancements using Kafka, facilitating downstream packet information transmission and replacing Bloomberg RMQ technology, resulting in a 2 times increase in trade volume and processing speed.
- Developed and launched a Redis distributed cache for ISIN to Object ID mapping in Bloomberg, drastically reducing mapping times to milliseconds and achieving a 100% accuracy rate by eliminating false mappings.
- Innovated disaster recovery architecture for backend services, slashing client data connection downtime to under 100 milliseconds while enhancing data accuracy and speed into Bloomberg platforms.

### EXPERIENCE

**Software Engineer** 07-03-2017 – 07-12-2019

**Ittiam Systems Bangalore IN**

- Proposed changes to the implementation of an algorithm to improve the quality of the video rendered by Ittiam's software which achieved a significant 7% gain in quality.
- Re-devised the software encoder application to a multi-threaded application resulting in increased usability and reduced run time performance by 50%.
- Optimized Software by evaluating critical modules and porting C C++ to low-level language (Arm Assembly) which boosted the performance by 400% using parallel instructions.
- Fixed and resolved security bugs in the Android video library which saved huge costs and waiting times for the client by 6 months and contributed to faster deployments.
- Composed scripts using Perl and Python to speed up the process of core functionalities by 200%.

**Software Intern** 05-10-2016 – 07-10-2016 **Ittiam Systems Bangalore IN**

- Designed a deinterlace software application that converts an interlaced (progressive) video format to a de-interlaced format to run on GPUs improving video rendering speed by 4 times.
- Migrated video codec from C and C++ on the CPU to Open-cl on the GPU and achieved performance increase by 4 times.

### TECHNICAL SKILLS

**Languages and Tools:** C, C++, Java, Python, JavaScript, Redis, Bash, SQL, HTML, CSS, RESTful APIs, JSON, Git, Arm Assembly, Neon.

**Technologies & Frameworks:** Node JS, React, Express, Flask, Bootstrap, Git, Agile, Waterfall.

**Database:** MySQL, MongoDB, SQLite, PostgreSQL.

**Skills:** Object-oriented programming, algorithm design, data structures, software development life cycle, test-driven development.

### PROJECTS

**Chess Game:** Built a command-line chess game variant with exclusive pawn gameplay in Python; optimized algorithms with hashmaps and hash sets, improving computational efficiency by 30% and reducing lag time.

**Restaurant WebApp:** Engineered a web app replicating restaurant website functionalities using NodeJS and Express for the backend and MongoDB for the database, improving user experience and operational efficiency by 40%.

**Database Implementation:** Created a high-performance single-user database system in C++ supporting comprehensive SQL functionalities, including joins and aggregations; demonstrated reliability and scalability through extensive testing with data sets from 10 MB to 1GB.

**Blog WebApp:** Developed a full-stack WebApp using the Django framework and integrated SQLite & PostgreSQL databases, enabling registered users to log in, create profiles, and publish blog posts that can support up to 1000 users.

**Software to Automate Bot:** Devised a sophisticated C++ algorithm for a knight-movement bot in a chess arena, integrating overhead camera input for real-time navigation and enhancing path efficiency by 2x.

### LEADERSHIP

- Supervised class activities as a class representative for 200 students of the ECE Department NITK from May 2016 to May 2017.
- Coordinated and executed alumni and academic events for 1000 members within a year on the Students Council at NITK, enhancing engagement and fostering stronger alumni relations.
- Mentored 10 Junior Engineers over 6 months on Ittiam Systems' code base; enhanced onboarding efficiency by 40% and reduced error rates in code deployments by 25%.

### HONORS & CERTIFICATIONS

- **Achievement Award:** Awarded \$4500 scholarship towards tuition, Aug 2019.
- **Team Engineer 2014:** Winning team member Trailblazer, a line follower robot competition at Engineer 2014, NITK.
- **Coursera and Edx certifications:** Server-side Development with NodeJS, Express, MongoDB, Introduction to SQL, Programming for Everybody, Python Data Structures, Using Python to access web data, JavaScript Introduction, Introduction to C++.