

Siva Satvik Mandapati

MS in Computer Science at NYU Courant

Ex Senior Software Development Engineer at Nokia

B.Tech. in Computer Science and Engineering at IITH

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EDUCATION

- **New York University (Courant Institute of Mathematical Science)** New York, NY
Master of Science in Computer Science Sept. 2025 – Present
- **Indian Institute of Technology, Hyderabad** Hyderabad, India
Bachelor of Technology in Computer Science and Engineering Aug. 2015 – May 2019

EXPERIENCE

- **Nokia** Bangalore, India
Senior Software Development Engineer March 2025 - Aug. 2025
 - **Device Simulation:** Developed simulation in **Golang** for L1 Layer devices such as CHM7, CHM7x etc. This will **simulate I2C buses**, reads and writes and the necessary behaviour based on those reads and writes.
- **Infinera India Pvt. Ltd.** Bangalore, India
SDE 2 / Senior SDE Aug. 2021 - Aug. 2024 / Oct. 2024 - Feb. 2025
 - **GCC0/1:** Developed a **Point to Point protocol** for communication between **two chassis of GX series** in C/C++. One is for management traffic and another is for encrypted traffic.
 - **Automation:** Developed an **automated system** in **Python** that tests the GCC0/1 and OSCX feature from bottom to top.
 - **Active-Active DCN:** Developed unprotected feature for DCN connection in C/C++, which helps in having **multiple simultaneous connections** to a chassis, in-turn increasing cloud connectivity with just one node.
 - **Packetgen:** Developed an **interactive program in Golang** which generates LLDP packets based on user input. All the features of Spirent program without the requirement or access to the hardware.
 - **Device Simulation:** Developed simulation in **Golang** for Pluggable Optical Layer devices such as CDC4, CAD16, DGE etc. This will **simulate register map**, reads and writes and the necessary behaviour based on those reads and writes.
 - **Device Simulation Farm:** Led a team of 3 and developed infrastructure for a cloud of servers (farm) in **Golang** for scheduling and running parallel unit tests using device simulation. This reduced the development time across the organization significantly.
- **Oppo Mobiles Pvt. Ltd.** Hyderabad, India
Software Engineer / Senior Engineer July 2019 - March 2020 / April 2020 - July 2021
 - **Android 10 and 11 upgrade:** Worked on building **Android 10** and **Android 11** camera back-end code base in C/C++ for the Reno 2 smart-phone series (Upgrading P OS to Android 10) and Reno 2, Reno 3, Reno 4 Pro and FindX smart-phone series (Upgrading Android 10 to Android 11) respectively. Dealt with **blocking and critical issues** for release.
 - **OHacker coding competition:** Developed an AI program in C++ to play the game *Luzhanqi*, a Chinese army chess game.
 - **Virtual Light Sensor:** Developed a proof-of-concept version of a software solution (VLS) from camera to replace light sensor in smart-phones, thereby **reducing the hardware cost**. Production-scale version deployed in few models

PATENTS

- **Virtual Light Sensor (VLS):** A mechanism to change screen brightness based on environment lighting using camera. Patent number: WO2021232900A1
- **Glare Removal:** An innovative way of using OIS (Optical Image Stabilization) to remove glare from a light source in the captured picture in a smart-phone camera. Patent number: WO2022001615A1
- **Pattern Conversion:** A technique to get custom patterns/colors based on pattern/color detection with an AI engine in a smart-phone camera. WIPO Publication number: 202041028968

- **Trail Light:** A method to capture a long exposure shot with series of short exposures with object detection and tracking in a smart-phone camera.
WIPO Publication number: 202041034727
- **Dolly Zoom:** A creative way of generating dolly zoom effect using multiple pictures with different zoom value along with object detection in a smart-phone camera.
WIPO Publication number: 202041035434

PROJECTS

- **Consensus Algorithms:** Built **Chandra-Toueg** and **Paxos** consensus algorithms in **C++** which are used for machines in a cloud to reach a consensus.
- **IMDB movie database:** Built customized schemas and database of movies from the original IMDB database using **Postgresql**.
- **McKinsey Analytics Hackathon:** Built a model to predict traffic variations at junctions for 4 months using a time series model with a given **time-series data**.
- **Land Cover Segmentation:** Built a model which uses **CNNs** for segmentation of given high resolution satellite images of land cover.
- **Parallel TSP:** Worked on parallelizing an **NP-Hard** problem, **TSP** (Travelling Salesman Problem). Genetic Algorithm was used to parallelize.
- **2-D Game:** Built a 2-D progressive game with **C++** as back-end.
- **Semaphore Implementation:** Tinkered with **Minix 3**, a UNIX based OS and implemented **Semaphores** in it.
- **Tic-Tac-Toe:** Built an **AI** for the game tic-tac-toe with the language **Prolog**. This game is essentially a user vs computer where computer will always strive to win according to user's moves.
- **Cleaner Bot:** Built a robot from scratch with **Arduino** and Ultrasound sensors with attached cleaning equipment which is coded to clean an entire room automatically (in-built algorithm).
- **Misc. Course projects:** Implemented various real life Data structures with optimal complexity algorithms. Designed and assembled a 3-D printed **V-8 Engine** using the software **SolidEdge**.

SKILLS

- **Languages:**
 - **Proficient:** C/C++, Python, Golang, JavaScript, Git, SQL
 - **Basic:** Java, HTML, CSS, PHP, ReactJS, Haskell, Prolog, Eiffel, FORTRAN, Bash, MySQL, Flutter
- **Tools/ Technologies:** Linux, PgAdmin4, GIMP, Blender, Adobe Photoshop, After Effects, Antlr4, SQL databases, Wireshark

ACHIEVEMENTS

- **Quality of Excellence Award 2024:** Awarded the Quality of Excellence 2024 during my tenure at Infinera.
- **Warrior Title:** Awarded the title **Warrior of 2020** during my tenure at Oppo Mobiles Pvt. Ltd.
- **Patents:** Filed patent applications for **5 inventions** based on work at Oppo Mobiles Pvt. Ltd..
- **OHacker coding competition:** Secured **1st rank** among 88 teams that participated in the preliminaries round.
- **McKinsey Analytics Hackathon:** Secured **32nd rank** among 3k+ participants in this hackathon.
- **JEE 2015:** Secured **933rd rank (99.9th percentile)** in IIT-JEE 2015 exam which is a Nation-wide engineering entrance examination.
- **EAMCET 2015:** Secured **100th rank (99.9th percentile)** in Telangana and **125th rank** in Andhra Pradesh EAMCET 2015 which are State-wide engineering entrance examinations.
- **12th Board:** Secured **988/1000** marks in the Board exams of Intermediate - fourth highest mark in the state.

EXTRA CURRICULAR

- **Sports:** Participated in **Inter-IIT Sports Meet 2016** at **Kanpur** in **Lawn Tennis** sport on behalf of IITH.
- **Teaching Assistant:** Worked as a Teaching Assistant under Dr. Sathya Peri in his courses, **OS-I, OS-II and Parallel and Concurrent Programming**.
- **Mentorship:** Was a part of **Sunshine Counselling Cell at IITH** and helped in **mentoring and guiding** 10 freshmen at IITH(2016 batch) in my second year.
- **Transport Coordinator, η vision 2017:** Managed a team of 10 people and tackled various problems that arose in the transport domain in the technical fest of IIT Hyderabad
- **Manager for ELAN & η vision 2018:** Manager for the domains Publicity, Transport and Security for ELAN & η vision 2018, the annual techno-cultural fest of IIT Hyderabad.