Sanjit Kumar

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EDUCATION

University of Illinois at Urbana-Champaign, *Master of Computer Science* ⊡ — Aug 2022 – May 2024, Champaign, USA
3.89/4.00 GPA

Vellore Institute of Technology, Vellore, *B.Tech Computer Science and Engineering* — Jul 2018 – May 2022, Vellore, India
9.23/10.00 GPA

PROFESSIONAL EXPERIENCE

Fall Software Engineer Intern, *Aviz Networks Inc.* ⊡ — Sep 2023 – Nov 2023, San Jose, USA
- Seamlessly integrated a network packet collector developed during the previous summer internship with a northbound catalog API, enabling streamlined packet filtering and destination selection.
- Working on a C based network packet capture system in 4G/5G devices using GPRS to identify the nature of the traffic with subscriber correlation information.

Summer Software Engineer Intern, *Aviz Networks Inc.* ⊡ — May 2023 – Aug 2023, San Jose, USA
- Designed and developed a highly performant and scalable network analyzer system in C++ that taps packets of high velocity traffic from network fabric of data centers to extract and stream metadata information.
- Leveraged scalable event processing systems like Kafka and Elasticsearch to for further analytics.
- Benchmarked performance on physical network devices with Ixia emulated traffic to test for scalability.

Software Developer Intern, *Zigma Software* ⊡ — Sep 2021 – Nov 2021, Erode, India
- Built a weigh-bridge management MERN stack web application for a 'trucks and heavy motor vehicles' weighing company. Programmed a dashboard for visualization of revenue metrics and constructed unit tests.
- Coordinated meetings with stakeholders for design and performance feedback and improvement.

Full Stack Developer Intern, *WebKnot Technologies Pvt. Ltd.* ⊡ — Nov 2020 – Dec 2020, Bangalore, India
- Integrated custom Tensorflow object detection models with Shinobi, a open source CCTV framework.
- Developed web pages with ReactJS and REST API with node.js and Express.js for two different MERN stack applications for local businesses in Bangalore.

SKILLS

Languages (Python, Java, C, C++) │ **Web Development** (ReactJS, Node.js, Express.js, PHP, HTML/CSS)

Database Management (MySQL, MongoDB, Elasticsearch) │ **DevOps** (AWS, Bash, Docker)

Systems Programming (Linux Kernel, Sockets, Hadoop, Apache Kafka, Distributed Systems) │ **Version Control** (Git, Github)

Machine Learning (TensorFlow, PyTorch) │ **Computer Graphics** (OpenGL, WebGL)

PROJECTS

Distributed ML Job Scheduler System ⊡
- Designed a distributed job scheduler system for ML inference tasks built on top of 10 Linux VMs from scratch using Java and Python.
- Includes a distributed data logging service, distributed group membership protocol and failure detector, a distributed files system and a real-time work scheduling algorithm to optimize query rate for ResNet and ImageNet classification tasks.

MapReduce Simulation ⊡
- An application to leverage the popular Google Map Reduce algorithm for computation intensive tasks in a distributed async environment emulated using multiple docker processes with randomized delays.

ORGANIZATIONS

Journalism Club, *Tech and Media Board Member* ⊡ — Feb 2020 – Jan 2021
- Worked with a team of 6 to move the literature club's newsletter segment (The Weekly Edge) online.
- Developed and launched a full scale MERN stack web app that facilitated writing, editing and publishing articles by club members. Tracked and increased reader traffic by 40%.

PUBLICATIONS AND PRIZES

Best Ethereum Project & Best Dyte Powered Project, — Mar 2021
DevSpace Hackathon, Computer Society of India, VIT ⊡
Developed a prototype for a fundraising platform (called WildSprint) that accepts ETH using Solidity, ReactJS, Dyte and Node.js to advocate for wildlife preservation using crypto crowdfunding.

Internet of Things Security: Attacks, Solutions, Strengths and Limitations, — Sep 2021
International Conference on Artificial Intelligence and Machine Vision, IEEE ⊡
Presented a comparative analysis of benchmarks between latest security frameworks in recent IoT literature while advised by Dr. Anil Kumar Kakelli.