

MANANK PATEL

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EDUCATION

Birla Institute of Technology and Science - Pilani, Goa Campus	2020 - 2024
B.E. Computer Science	CGPA: 8.17/10.0

PROFESSIONAL EXPERIENCE

Software Engineer Arista Networks, Pune, India	July 2024 - Present
• Working on overall stability and performance optimization	
Software Engineering Intern Arista Networks, Pune, India	Jan 2024 - June 2024
• Working with wifi-cloud team on performance optimization and scaling	
Software Engineering Intern Arista Networks, Pune, India	May 2023 - July 2023
• Worked with wifi-cloud team on infrastructure migration from CentOS to AlmaLinux	
• Contributed to containerization of legacy monolithic products	
GSoC Contributor OSPO UC Santa Cruz	May 2023 - Aug 2023 Remote
• Implemented iouring based communication backend for network-based key-value store	

RESEARCH EXPERIENCE

Undergraduate Research Student DaSH Lab, CSIS, BITS Goa	May 2022 - Dec 2023
• Researched iouring applications in reducing latency for data management systems	
• Analyzed and benchmarked IO performance using tools like bpf, perf, flame graphs	
• Studied distributed systems concepts including GFS, Raft, consensus algorithms	

TECHNICAL SKILLS

Programming Languages: C, Rust, Assembly, Python, Java, Bash
Systems: Linux kernel development, Driver development, Low-level programming
Tools & Technologies: Git, AWS, Docker, Wireshark, OpenVPN, GDB, IDA, Ghidra
Areas of Expertise: Computer Systems, Digital Forensics, Reverse Engineering

SELECTED PROJECTS

Mandelbrot Set Plotter

- Developed multi-threaded Rust program using crossbeam and rayon for plotting Mandelbrot set
- Implemented complex number mapping and image processing capabilities

NES Emulator

- Built Nintendo Entertainment System emulator in Rust implementing 6502 instruction set
- Developed complete addressing modes and bus architecture

LEADERSHIP

Chief Coordinator Department of Photography, BITS Goa	2022 - Present
• Lead team of seven coordinators managing photography coverage for university events	
• Responsible for production of aftermovies for three student-run festivals	