




ASHUTOSH PANDA

+91-934-854-9003 | ashutoshp.ug23.ec@nitp.ac.in | github.com/zen-zap

EDUCATION

Bachelor of Technology in Electronics and Communication <i>National Institute of Technology, Patna</i>	Jun 2023 – Present CGPA: 7.69/10
Senior Secondary <i>Saraswati Vidya Mandir</i>	May 2021 – May 2023 Percentage: 80.83%
Secondary <i>De Paul School</i>	Jun 2010 – Jul 2021 Percentage: 97%

PROJECTS

ROC – Actor based Distributed Key-Value Store <i>Rust, Tokio</i> <ul style="list-style-type: none">Built a multi-tenant async key-value store with per-user data isolation.Packet transfer over QUIC with on-the-fly self-signed certificate generation.Implemented SET/GET/DELETE/RANGE/LIST commands.Crash-safe snapshots every 10s, reducing data-loss risk.Enforced dynamic user session management with UUID.	Feb 2025 
x86_64 Operating System <i>Rust, QEMU</i> <ul style="list-style-type: none">Used VGA text buffers for screen output.Added CPU exception handling and Interrupt handlers.Set up memory management with paging and heap allocators.Built a cooperative multitasking model using async/await and task executors.Added integration tests to test each feature that run directly on kernel.	Mar 2025 
Mini TCP – Userspace TCP/IP Stack <i>Rust, etherparse, tshark</i> <ul style="list-style-type: none">Implemented a minimal userspace TCP/IP stack from scratch.Built a RFC-compliant TCP state machine following RFC 793.Handled low level packet parsing extracting the payload.Developed a concurrent connection manager using locking mechanism.	Jan 2025 

TECHNICAL SKILLS

Programming Languages: Rust, C, Java, Python
Technologies & Frameworks: AWS, TensorFlow, LangChain
Developer Tools: VS Code, Neovim, Git & GitHub, Docker, Kubernetes, Postman
CourseWork: Data Structures, Object Oriented Programming

ACHIEVEMENTS / CERTIFICATIONS

LeetCode: Solved over 100 LeetCode problems	Jan 2025
Codeforces: Achieved a peak rating of 964 (Newbie)	Jan 2025
Cloud & DevOps: Worked with several AWS services to deploy and scale applications for heavy traffic	May 2024

EXTRACURRICULAR ACTIVITIES

Team Gray Interface, HackSlash <i>Member</i> <ul style="list-style-type: none">Collaborated on deep learning projects (Neural Style Transfer, GPT modeling) and containerized models for reproducible deployment.	Apr 2024 – Present
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