

Arpan Bhandari

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PROFESSIONAL SUMMARY

Software engineer who builds production systems end to end, from backend services to web and mobile apps. Worked on products used by 100+ restaurants and 100K+ users, improving application performance by 60% and authentication latency by 70%. Projects include a serverless PostgreSQL platform in Rust, a TypeScript RPC compiler, and an RL-based desktop automation framework.

EXPERIENCE

Software Engineer

Codapulse Global

May 2026 to Aug 2026, Onsite

- Independently architected and built Sitora CMS end-to-end, including backend APIs, database architecture, RBAC, caching, web, and mobile applications.
- Built Rosera RMS end-to-end with POS, QR ordering, payments, inventory, accounting, reporting, and cashier workflows for 100+ restaurants.
- Improved Skolora performance by ~60%, reduced auth latency by ~70% and server load by ~30%, while building live-class infrastructure, LMS support, DRM, and AI-powered features for 100K+ users and 10M+ daily requests.
- Built AI-assisted engineering workflows for code generation, code review, and UI/UX testing, accelerating development workflows by up to 5x.

Software Engineer

Freelance

Dec 2022 to Jul 2024, Remote

- Engineered a distributed CRM that increased workflow throughput by 150% through asynchronous processing and backend automation.
- Built a production exam platform serving 20K+ learners, with secure authentication, exam workflows, and scalable deployment.
- Developed an end-to-end hotel booking platform with GraphQL, PostgreSQL, AWS, payments, and automated CI/CD, reducing deployment time by 40%.

PROJECTS & RESEARCH

- SkelaDB:** Serverless PostgreSQL platform built in Rust as a self-hosted Neon alternative, with separated compute and storage, WAL-backed branching, and 118 ms median branch latency at 100K rows, 15% faster than a matched local Neon build.
- Joor:** Type-safe RPC framework built in TypeScript with ahead-of-time compilation for major JavaScript runtimes, delivering 17% lower median response latency and 16% more requests per second than a comparable RPC framework.
- Bumblebee:** Python desktop automation framework trained on a year of cursor data, using SAC reinforcement learning to generate human-like mouse paths with 100% target accuracy and 3.2 ms median latency.

EDUCATION

Bachelor of Science in Computer Science

University of Southern Mississippi, Aug 2024 to Present

SKILLS

- Languages:** TypeScript, Python, Go, C++, SQL, Rust
- Frameworks & APIs:** Node.js, Bun, Elysia, FastAPI, React, Next.js, React Native, Expo, Tailwind CSS, REST, RPC
- Data & Infrastructure:** PostgreSQL, Redis, MongoDB, MySQL, Docker, Kubernetes, AWS, GCP, Azure, Cloudflare, Linux
- AI & Systems:** PyTorch, MLX, Hugging Face, Reinforcement Learning, Distributed Systems, System Design, RBAC/ABAC/ReBAC

HONORS & RECOGNITION

- Generation Google Scholar (2024), President's List (3x) and Dean's List, University of Southern Mississippi
- DeepLearning.AI, Machine Learning Specialization