

Pankaj Kumar Thapa

Software Principal Engineer | Cloud Native Solutions | Agile Development

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📍 Bengaluru, IN

SUMMARY

A seasoned software developer with over 12+ years of extensive experience in software design and development. Proficient in managing the entire software development life cycle, from initial planning to implementation and maintenance. Skilled in conducting impact analysis, project reviews, and comprehensive documentation. Possess deep expertise in Object-Oriented Programming (OOP) and advanced design techniques.

SKILLS

C C++17 STL Golang Multithreading Data Structures Docker Kubernetes Python OpenSSL Linux
C++ Sanitizers Object Oriented Design TLS/MTLS Knative NATS Messaging Qt Python

EXPERIENCE

Software Principal Engineer

DELL Technologies

📅 12/2022 – Present 📍 Bengaluru, IN

- Designed and developed the ECE Upgrade feature for Dell's Native Edge.
- Implemented mTLS (Root CA, Intermediate CA, CSR, Cert) authentication for gRPC communication and integrated the Raft algorithm.
- Created the container orchestration feature for Dell's Native Edge using the Podman library.
- Developed a high availability clustering feature for Dell's Native Edge, utilizing the Raft algorithm.

Member of Technical Staff III

vmware

📅 06/2021 – 12/2022 📍 Bengaluru, IN

- Developed and enhanced blockchain data encryption algorithms using standard crypto libraries such as OpenSSL Crypto++ and Relic, improving system security.
- Enhanced blockchain data encryption algorithms using OpenSSL Crypto++ and Relic, resulting in an ~25% increase in data security and encryption speed.

Project Glimpse: Concord-BFT is a generic state machine replication library that can handle malicious (byzantine) replicas.

Advanced Software Engineer

Honeywell

📅 04/2019 – 06/2021 📍 Bengaluru, IN

- Led the development of Honeywell's ICWP product for Dubai, Incheon, and Gatwick airports, improving user interface responsiveness by 30%.
- Conducted comprehensive code reviews for team members, ensuring code quality.
- Utilized C++11, Qt, Google Test and other technologies to enhance product features and streamline the CI/CD pipeline, thereby reducing deployment time.

Project Glimpse: ICWP is the advanced L4 GUI application running on Linux platform to assist the Air Traffic Controller Officers (ATCO) with Surveillance and Routing on Aerodrome.

Principal Engineer



09/2015 – 04/2019 Bengaluru, IN

- Developed C++ applications for Ingenico POS terminals (Move/2500, Link/2500, iCT220, iWL, & iCMP), enhancing transaction processing speed.
- Developed and optimized DLL and JAR components, improving application efficiency and interoperability across various platforms.
- Implemented Serial Port (RS-232) programming using Win32 API(s).
- Led a team of 3 engineers in the design and development of Ingenico's Tetra terminals, resulting in an ~30% reduction in development time and improved product reliability.

Project Glimpse: The uniPAY NEXT is an application communicates with the billing application (in desktops) and POS terminal which prompts to swipe customer's card. EDC reads the exact amount present in the billing. This prevents human entry error.

Software Engineer



04/2012 – 09/2015 Bengaluru, IN

- Developed embedded applications on SIM cards OS (both Native Cards and Java Cards).
- Optimized XRAM variables for SIM cards.
- Developed and maintained SIM Toolkit Dynamic STK 2G/3G Smart Card OS, enhancing system stability.
- Implemented GSM standards (11.11, 11.14, 03.40, 03.48) in SIM card applications, ensuring compliance and improving interoperability across various network providers.

Project Glimpse: The SIM card houses an application (usually developed in C or Java) which is responsible for deciding which mobile network to latch on. The application chooses the network with lower calling cost, thereby reducing the call cost of a user.

EDUCATION

Bachelor of Technology (Information Technology)

Mizoram University

07/2007 – 07/2011 Aizawl, IN

AWARDS & ACHIEVEMENTS

- **Delight Award** – for integrating the Codeium Gen AI tool, enhancing developer efficiency, and disseminating knowledge across various teams globally as part of routine tasks, resulting in a ~50% productivity increase (Mar 2024).
- **Delight Award** – for implementation of Native Edge's Container Orchestrator (Dec 2023).
- **Delight and Cheers Award** – for being ISG Hackathon Global Finalist (Dec 2023).
- **Extraordinary Award** – for resolving mission critical IPMI issue (Sep 2023).
- **Extraordinary Award** – for implementation of Native Edge's ECE Upgrade feature in a short span of time (Jun 2023).
- **Bravo Award** for code design and development for Mobile (Aircraft) Label changes (Sep 2020) - Honeywell.
- Awarded for implementing Remote Upgrade feature on Ingenico's POS terminal and Java client (Nov 2017)
- Selected from India for "**Discovery Leadership Programme-2014**" in San Francisco, US.

CERTIFICATION

- Six Sigma Green Belt.

I hereby declare that the information mentioned herein is true to the best of my knowledge.