Chaitan Divagi

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Experience

Software Engineer IV, NCR Voyix (Terafina Software Solutions Pvt Ltd) – Hyderabad, India   Sep 2024 – Present

Product: Aloha Cloud

Domains: Cloud, Distributed Systems, Embedded, AI/ML, System Design

- Leading team and developing core modules for **Aloha Cloud**, a POS system with Android/Java UI and C++ backend.
- Replaced legacy in-store servers with a cloud-native **generic API server** using gRPC (C++20/Node.js).
- Built product recommendation engine using **CNN-based AI/ML** techniques.
- Applied low-level design patterns, multithreading, and optimized networking for real-time communication.

Senior Software Engineer, Mathworks India Pvt Ltd – Bengaluru, India   Sep 2021 - Sep 2024

Product: Simulink **Domains:** Simulation, UI/Graphics, C++ Modernization, Software Architecture

- Designed and implemented APIs for accessing various UI-related services, including modernizing the legacy 2D graphics engine to flexible APIs for developers using C++17.
- Maintained UI infrastructure of **Simulink**, which is based on Chromium Embedded Framework and Qt6.
- Developed reusable UI APIs and design abstractions.

Senior R&D Engineer, Simyog Technology Pvt Ltd – Bengaluru, India   Jun 2020 - Sep 2021

Product: Compliance Scope

Domains: Simulation, Performance Optimization, System Refactoring

- Enhanced simulation performance and UI of **Compscope** using C++17/Qt/QML/Python.
- Refactored monolithic components into modular services for maintainability.

R&D Development Engineer, Dassault Systèmes Solutions Lab Pvt Ltd – Bengaluru, India   Sep 2017 – Feb 2020

Products: 3DEXCITE Deltagen, CATIA Composer

Domains: Computer Graphics, CAD Integration, Cloud APIs

- Extended features in **3DEXCITE Deltagen** using Qt/C++14 for material library visualization. `http://bit.ly/2VQdz9Y`
- Developed **PowerBy plugin** for **CATIA Composer** to connect with in-house cloud platform using C++14, JS, Python.
- Optimized large CAD parser modules for speed and modularity.

Software Engineer, Innoviti Payment Solutions Pvt Ltd – Bengaluru, India   Apr 2016 - Sep 2017

Product: UniPay

Domains: Embedded Systems, Networking, Banking, Financial Security

- Developed real-time card based payment application that handles transaction between Point Of Sale terminal and bank, supporting Flexible Industry Standards (ISO8583 over TCP/IP, EMV) using C++11, Python.
- Used C++11 and Python to handle secure, low-latency financial transactions.

Software Engineer, Asteria Aerospace Pvt Ltd – Bengaluru, India   Mar 2014 - Aug 2015

Product: Mission Control Software

Domains: Embedded Systems, Real-Time Telemetry, UAV Systems

- Involved in early design and development of Qt/C++11/Python based cross platform application which commands, controls and visualizes real-time telemetry data of Unmanned Aerial Vehicles(UAVs) and payloads.
- Developed many features including offline maps, live video streaming and various UI components following strict coding guidelines.

Research & Development Engineer, Automatronics – Goa, India   Jul 2012 – Mar 2014
Products: Blister Sentry, Mining GPS Tracker
Domains: Computer Vision, Embedded Systems, Field Integration

- Single handedly designed and developed Machine Vision System (Blister Sentry) for medical tablet packaging inspection using Qt/C++/OpenCV/Python.
- Built SMS-enabled GPS tracker for mining vehicles using Java/OpenGTS.
- Integrated PIC microcontroller with SSD using MikroC for embedded logging.

Education

Indian Institue of Technology (Jodhpur, India), M.Tech in Artificial Intelligence   Jan 2025 – Jan 2027
Goa University (Goa, India), M.Sc in Electronics   Jul 2007 – Jun 2012
Goa University, (Goa, India), B.Sc in Electronics   Jul 2010 – Jun 2010

Technical Skills

Languages & Frameworks: C++17/20, Qt/QML, Boost, Poco, Python, Java, JavaScript, Node.js, NestJS, SQL, CUDA C, OpenMP, C, PyTorch, TensorFlow, Scikit-learn
AI/ML Competencies: Supervised and unsupervised learning, reinforcement learning, convolutional neural networks (CNNs), Transformers, deep learning frameworks
Graphics & Vision Technologies: OpenCV, OpenGL, Vulkan, WebKit, Chromium
Systems Programming: Multithreading, Networking (TCP/IP), OpenSSL, Custom Protocols, GDB, Valgrind, Embedded Systems
Build & DevOps Toolchain: CMake, Makefile, Git, Conan, Docker, Jenkins, Ansible, CI/CD pipelines
Testing & Debugging: GTest, GMock, C++ Sanitizers, Test-Driven Development
Design & Architecture: Design Patterns, Low-Level Design (LLD), High-Level Design (HLD), GRPC, GraphQL
Other Core Skills: Strong grasp of Data Structures & Algorithms, Agile/Scrum practices, cross-platform development, scalable software architecture

Achievements

- **Collaborator Award** for achieving organizational objectives by developing features with least regression. *- 2019, Dassault Systèmes*
- **Top Gun Award** for developing a feature 'Custom Offline Maps' opposing Google Maps, with a good design approach. *- 2015, Asteria Aerospace*

Languages

English: Fluent (professional)
Konkani: Native speaker
Hindi: Fluent
Marathi: Fluent
German: Intermediate (B1)