

Serendeeep Rudraraju

Software engineer focused on research & development, AI systems, and technical software

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SUMMARY

Software engineer with professional experience since 2019 and current M.Sc. studies in Computer Science. Builds technical investigations and reliable software across AI systems, model behavior, local inference, audio analysis, and developer tools. Combines literature-driven independent study with production experience in Python, FastAPI, Flutter, Next.js, and mobile systems.

TECHNICAL SKILLS

Programming: Python, Dart, Kotlin, TypeScript, Rust, SQL

AI and research: Model evaluation and forensics, state space models, local inference, audio analysis, speech recognition and synthesis, technical literature synthesis

Software systems: FastAPI, Flutter, Android, Next.js, React, Room, PostgreSQL, Docker, CI/CD, Git

PROFESSIONAL EXPERIENCE

Student Assistant, Flutter Developer

Justus Liebig University Giessen · Gießen, Germany · Nov 2025 – present

- Develop and refine Neatic, a Flutter application supporting nutrition research at the Institute of Nutritional Science.
- Translate interdisciplinary research needs into product features, implementation decisions, and mobile UX improvements.

Technical Consultant / Flutter Developer

Techineur Solutions · Hyderabad, India · Sep 2021 – May 2025

- Led Flutter client products from early requirements through Android and iOS release, owning architecture and delivery decisions.
- Built across Flutter applications, Next.js interfaces, and FastAPI services in collaboration with product, design, and QA teams.

Flutter Developer

EOS Infotech · Remote, part-time · Jun 2019 – Aug 2021

- Delivered Android and iOS mobile features while completing undergraduate studies.

RESEARCH AND SELECTED PROJECTS

Independent study in AI systems

Test-time adaptation · Model interpretability · Long-context sequence models · 2025 – present

- Map literature, assumptions, and evaluation questions across test-time training, model mechanisms, and state space memory.
- Turn study into technical essays, reproducible software, structured reading notes, and small implementations without presenting unfinished work as research results.

cratemind

Python · FastAPI · Local audio analysis · Released open-source project

- Designed a local-first workflow that derives tempo, Camelot key, and genre signals from audio and organizes tracks into configurable DJ-library crates.
- Built resumable processing, a browser interface, release automation, and tests spanning analysis, downloading, pipeline, and web flows.

Marginalia

Kotlin · Jetpack Compose · Room · PDFium · Android Ink

- Build an offline-first Android tablet application for handwritten notes beside course PDFs, with page-aware ink and local data.
- Separate stylus writing from touch navigation and verify database, PDF import, zoom, link, and ink behavior with automated checks.

EDUCATION

M.Sc. Computer Science

Philipps-Universität Marburg · Apr 2025 – Jun 2027 expected

AI, natural-language systems, distributed systems, cloud computing, data integration, and IT security

B.Tech Computer Science Engineering

ICFAI Foundation for Higher Education · 2019 – 2023

TECHNICAL WRITING, CERTIFICATIONS, AND LANGUAGES

Writing: AI systems, model architecture, evaluation, developer tooling, and software design at **The Prompt & The Ponder**

Certifications: Oracle Cloud Database 2023, Migration and Integration Professional · Oracle Cloud Infrastructure 2023, AI Foundations Associate

Languages: English (fluent), Telugu (native), Hindi (fluent), French (basic)