GUNAKAR **CHALLA**

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EDUCATION

Master of Science in Computer Science — Bern, CH | 2024 - Present
University of Bern

WORK EXPERIENCE

UNIVERSITY OF FRIBOURG | Unterassistent — Fribourg, CH | Aug 2024 – Present

- Automated the generation of schemas and OAS 3.0 specification for existing express APIs in MMAR.
- Researched and implemented file upload functionality in MMAR.
- Researched and implemented a POC on migrating Aurelia MDC project from Webpack to Vite.
- Added custom functions in VizRep(a domain specific language) to render GLTF and image files based on UUIDs of the files in MMAR.
- Fixed various frontend and backend bugs in MMAR.
- Designed multiple posters to explain MMAR project and topics like metamodeling, integrating AI into metamodeling, etc.
  Contact: Prof. Dr. Hans-Georg Fill, Professor (Department of Informatics)

LTIMINDTREE LTD. | Consultant - Package Implementation — Hyderabad, IN | July 2021 - Jan 2024

- As a PI/PO developer, created multiple interfaces using REST, IDOC, SFTP, adapters in Carrier ANZ project.
- Migrated the scenarios (moved the interfaces) from NW 7.5 SAP PI split stack system to Java only system in Clarios project.
- As part of Clarios AMS team, monitored the existing interfaces and resolved several runtime issues.
- As a Graduate Engineer Trainee, implemented a few interfaces using SAP Cloud Integration in Practice Unit.
  Contact: Pravin Vichare, Associate Director (SAP)

SKILLS

Languages: Java, C++, Python, C, Typescript, Javascript, SQL
Tools: SAP PI/PO/CI, Postman, Swagger, ServiceNow, Jira
Libraries & Frameworks: Aurelia, Express, Flutter, PyTorch
Technologies: Git, AWS, Docker, ROS, Arduino, Markdown, LaTeX

PROJECTS

PARALLEL MANDELBROT SET RENDERER — Java

Modernized a legacy single-threaded Applet into a Java Swing application, introducing an ExecutorService thread-pool architecture for parallel Mandelbrot rendering. Devised tile-based workload partitioning and synchronization mechanisms that drove a 3× performance boost on a quad-core CPU while preserving UI responsiveness.

IDENTIFICATION OF INSECTS AND PREDICTION OF PESTICIDES — Python, Dart(Flutter), PHP, SQL

Built an end-to-end AI-driven pest-management system that detects crop-damaging insects with YOLOv4 and recommends crop-safe pesticides via a Flutter app. Architected a serverless pipeline on UbiOps + PHP/MariaDB, cutting on-device compute needs to zero and achieving ≈95 % mAP on nine insect classes.

ACHIEVEMENTS

AWS CERTIFIED SOLUTIONS ARCHITECT ASSOCIATE

BUSINESS UNIT OF THE YEAR AWARD

BEST PAPER AWARD

STATE 4TH RANK IN 8TH INTELLECTUAL OLYMPIAD