

# Rutvik Yamkanmardi

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## TECHNICAL SKILLS

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**Programming Languages:** C, C++, Python, Java, Go, JavaScript, SQL  
**Backend & Frameworks:** Nodejs, Expressjs, Django  
**Databases:** MySQL, PostgreSQL, Cassandra, MongoDB  
**Cloud & DevOps:** AWS, GCP, Lambda, Docker, Kubernetes, GitHub Actions, CI/CD, Webhooks  
**Software Architecture & Messaging:** Microservices, Agile & Scrum, RabbitMQ  
**AI & Data Processing:** TensorFlow, PyTorch, CUDA, OpenCV, Nvidia Jetson, Computer Vision, Pandas, NumPy  
**Robotics & Embedded Systems:** ROS2, Robotics Middleware, Nvidia Jetson

## EXPERIENCE

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**Backend Team lead** | *Chico State Enterprises - SAP UCC* March 2024 – Present

- Redesigned the backend of the entire website
- Architected the Database Design to handle the compromise between development speed and performance
- Optimised Database schema and APIs reduce latency issues
- Worked in a collaborative environment, to resolve conflicts and technical issues as part of "One Team"
- Agile Development process followed to continuously update the systems as per the changing needs of the client

**Computer Vision - Research Assistant** | *Chico State Enterprises* June 2024 – Present

- Implemented Structure from Motion to calculate Rutting Depth on the Road
- Handled requirements in an AGILE method to ensure on-time delivery
- Used both Python-Matplotlib-OpenCV and MATLAB to generate a Point Cloud of SURF Features
- Worked in a collaborative environment, to resolve conflicts and technical issues as part of "One Team"
- Experimented with different algorithms to boost performance
- Implementation plans to reduce the cost of calculating Rutting Depth by 4000% - by cleverly using a single GoPro to generate the Point Cloud

**Software Engineer** | *IndiaMart InterMESH Ltd* May 2022 – June 2023

- Developed and maintained a high volume API dealing with millions of per-day requests
- Performed database and server migrations to reduce latency issues
- Performed codebase migration - from PHP to Golang
- Optimised code to ensure faster delivery of packets

## PROJECTS

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**Crosswalk Pedestrian Safety System** | *OpenCV, Jeston Orin, C++, Yolo Object Detection* May 2024

- Developed a pedestrian safety system using YOLO for object detection, optimized with CUDA for speed, achieving 90% accuracy, and deployed on a Jetson Orin board.

**Multiplayer Chess Website** | *Django, JS, GCP, Postgres* October 2024

- Built a real-time multiplayer chess platform supporting 10,000 players with WebSockets, Dockerized for fast deployment, and load-balanced on GCP.

**Voice-Activated Auto Navigating Robot** | *ROS2, VOSK, GPT-3.5, Turtlebot, Python, Yolo* December 2024

- Designed a ROS2-powered Turtlebot with GPT-3.5 for instruction processing, YOLO for object detection, and a wake-word system for privacy-focused activation

## EDUCATION

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**California State University - Chico**

*Master of Science in Computer Science*

June 2025

GPA: 4.0/4.0