

# S. KASINADH SARMA

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## SUMMARY

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AI/ML Developer with a strong foundation in deep learning frameworks, computer vision, and natural language processing. Proven ability to develop and implement AI solutions for real-world problems. Proficient in TensorFlow, PyTorch, and Scikit-learn. Seeking a challenging role in the field of AI/ML, where I can contribute to the development of innovative and impactful solutions.

## EXPERIENCE

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### Security Researcher

TryHackMe

- Completed hands-on cybersecurity challenges in web security, network analysis, cryptography, and ethical hacking.
- Practiced real-world pentesting techniques using tools like Nmap, Burp Suite, Hydra, and Metasploit.

**Key Skills:** Linux, Bash, Vulnerability Assessment, Penetration Testing, OSINT, Wireshark, Cybersecurity, CTFs

### Summer Trainee

Intel Unnati

- Built an AI-powered road object detection system with a GTK GUI using COCO dataset and OpenCV. ([GitHub](#))
- Researched model training and deployment pipelines using TensorFlow and Python-based CV tools.

**Key Skills:** Python, TensorFlow, OpenCV, GUI (GTK), Computer Vision, Model Deployment, ML Pipelines

## PROJECTS

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### VishwamAI

GitHub

- Developed a scalable AI framework supporting NLP, computer vision, and data analytics with modular APIs.
- Focused on real-time performance, custom TPU/GPU kernel integration, and production-ready deployment.

**Key Skills:** JAX, Flax, PyTorch, TensorFlow, Custom Kernels, TPU/GPU Optimization, API Design

### Vicharcha

GitHub

- Created a social platform for discussions, feeds, reels, and research-focused communication.
- Implemented real-time messaging, thread-based conversations, and scalable backend architecture.

**Key Skills:** FastAPI, WebSockets, PostgreSQL, Redis, Frontend-Backend Integration, System Design

### Emergency Vehicle Detection & Route Optimization

GitHub

- Built an AI system to detect emergency vehicles and optimize traffic routes in real-time.
- Used YOLO for object detection and reinforcement learning for intelligent pathfinding.

**Key Skills:** YOLO, OpenCV, Reinforcement Learning, Real-Time Computer Vision, Traffic Systems

## RESEARCH ARTICLES

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- NextGenJax: A Comprehensive Analysis of State-of-the-Art Machine Learning Libraries and Models** | [Link](#)
- Revolutionizing Machine Learning: The Emergence and Impact of Google's TPU Technology** | [Link](#)

## SKILLS

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- **Programming Languages:** Python, TypeScript, Bash, C++, C
- **AI/ML Frameworks:** TensorFlow, PyTorch, JAX, Flax, Keras, Scikit-learn, Transformers, OpenAI Gym, FastAI
- **ML Techniques:** Deep Learning, RL, NLP, CV, Genetic Algorithms, Optimization, LLM Fine-tuning
- **Tools/Platforms:** Git, Docker, Kubernetes, Linux, FastAPI, Nginx, PostgreSQL, Redis, VS Code, Tmux, Jupyter, Azure, GCP (TPUs)
- **Databases:** PostgreSQL, MongoDB, SQLite, Firebase
- **Dev/System Skills:** Linux Programming, Shell Scripting, Debugging, System Design, Performance Tuning, CI/CD
- **Web/API:** FastAPI, Flask, REST, WebSockets, Realtime APIs
- **Research Focus:** Protein LLMs, DNA/Protein Dynamics, Drug Binding, Mutation Analysis, Artificial Uterus, PBS, Kernel Optimization

## EDUCATION

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### Parul University

B.Tech in Computer Science and Engineering (Cyber Security)  
CGPA: 7.46

Vadodara  
November 2020 - March 2024

## CERTIFICATIONS

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- Introduction Of IoT - **NPTEL**
- Introduction to programming Using Python - **HackerRank**
- Cybersecurity Roles, Processes & Operating System Security - **Coursera, IBM**
- Networking Basics - **Cisco**
- Networking Devices and Initial Configuration - **Cisco**
- Introduction Of Cyber Security - **Cisco**
- Google Cloud - **Google Cloud Skills**
- Google Professional Cyber Security - **Google Professional Cyber Security**