

Prerana Shenoy Sedimane Prakasha

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EDUCATION

University of Southern California

Los Angeles, CA

Master of Science in Computer Science | SWE USC

Aug 2023 – May 2025

GPA: 3.95/4.0 | Courses: Algorithms, Deep Learning, 3D Vision, Robotics, Natural Language Processing

RV College of Engineering

Bangalore, India

Bachelor of Engineering in Computer Science | Technical Head at Coding Club

Aug 2017 – Jul 2021

GPA: 9.29/10 | Courses: Data Structures, Algorithms, Object Oriented Programming, Operating Systems, Data Science and Machine Learning, Computer Networks, Distributed Programming, Computer Architecture, Big Data

SKILLS

- **Programming Languages:** Java, Python, C/C++, Scala, HTML, CSS, Javascript, JSP, ReactJS, Node.js
- **SDE Tools:** Kubernetes, Docker, Apache Kafka, SQL, MongoDB, DynamoDB, Hadoop, AWS, GCP, ELK Stack
- **Machine Learning:** Tensorflow, PyTorch, Keras, Scikit-learn, Numpy, Pandas, OpenCV, Open3D, ROS, Unity, AWS SageMaker, LLMs, CNN, Generative AI, GANs, Multimodal learning
- **Others:** Spring MVC, JQuery, Kibana, Grafana, Prometheus, RTP, SIP, TCP/IP, HTTP, Git, Github, Cloud Computing, Jenkins, Jira, REST API, CI/CD, Agile, Linux

EXPERIENCE

Dragonfruit AI

Menlo Park, CA (Remote)

Machine Learning Engineer Coop

Jan 2025 - Present

- Developing custom models, improving existing models, working on MLOps pipelines handling data in the cloud
- Contributing to a team that works with **LLMs**, **vision transformers**, embedding models, efficient **object detection models**, and **object tracking** technologies

Amazon

Seattle, USA

Software Engineer (Machine Learning) Intern

Jun 2024 – Aug 2024

- Implemented pet profile autofill for personalized recommendations based on deep learning using **OpenAI CLIP** deployed in **AWS SageMaker** and trained **AWS Rekognition** using **Python** achieving an **F1 score of 0.82**
- Developed a feature for memorializing deceased or rehomed pets while stopping recommendations and subscriptions in real-time, using **Java**, **JavaScript**, **JSP**, **AWS Lambda**, and **DynamoDB**, and pushed it to production

Cisco Systems

Bangalore, India

Software Engineer

Aug 2021 – Jul 2023

- Developed scalable backend services in **Scala** and **Java** for WebexCC using cloud-native **microservice** architecture on **AWS** and **Kubernetes**, ensuring high availability and fault tolerance for voice call handling
- Managed voice calls with **Apache Kafka**, **Session Border Controller**, **SIP Proxy Server**, and **REST APIs**
- Reduced number of lines of code of services by **90%** using Kubernetes Operator with **Helm** and **Go**

Samsung R&D Institute

Bangalore, India

Research Intern

May 2020 – Jul 2020

- Improved structural and perceptual quality of zoomed-in images using deep learning through **Super-Resolution** Convolutional Neural Network (CNN) and **reduced its computation costs** by processing RGB and raw images
- Conducted experiments with **separable convolutions**, **optimizations**, and **skip connections** to achieve a **97%** reduction in computation cost while enhancing **PSNR** and **SSIM** of the generated images

PROJECTS

Using Gaussian Splatting with Virtual Reality | Python (Pytorch)

Sep 2024 – Present

- Research at **USC Institute for Creative Technologies** under Prof. Yajie Zhao (targeting top conferences 2025)
- Working on a Virtual Reality project with **3D Gaussian Splatting**, **Transformers** and **Computer Vision**

Code Debugging using LLMs and Transfer Learning | Python(Pytorch) | [link](#)

Sep 2024 – Dec 2024

- Implemented **Automated Program Repair (APR)** for low-resource programming languages using **Large Language Models (LLMs)** through **Transfer Learning**
- Fine tuned **RepairLlama** using **LoRA** to debug and correct code for **C/C++** language achieving a **CodeBLEU score of 0.91** outperforming state-of-the-art