SUSHANT GAUTAM

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EDUCATION

Master of Science in Computer Science, Mississippi State University *Aug 2023–May 2025*
Specialization: AI, Machine Learning, Data Science. GPA: 4.0.
Relevant Coursework: Algorithms, Cloud Computing, AI Robotics, Autonomous Vehicles, Data Science, Deep Learning.

EXPERIENCE

SDE Intern, Amazon Inc Seattle, WA May–Jul 2025

- Built a scalable web dashboard (Next.js, TypeScript) summarizing logs from 1,000s of test runs; results processed in <5s.
- Automated zero-touch deployment via AWS CDK/Elastic Beanstalk; app rollout in <10 min.
- Delivered intelligent failure summaries, reducing root-cause analysis time by 40–60%.

Graduate Research Assistant, Mississippi State University Starkville, MS Aug 2023–May 2025

- Researched computer vision (Generative AI, GANs, Diffusion) with Stanford, Princeton, BlueHalo; improved image restoration accuracy by 20%.
- Led ML deployment automation using CI/CD (GitLab, Docker, Airflow, K8s, AWS EC2); optimized models with PyTorch-Lightning, Optuna, Scikit-learn.

ML Engineer, Proxmed Pty. Ltd. Victoria, Australia Feb–Aug 2023

- Developed Large Vessel Occlusion detection (YOLOv7); increased accuracy by 8%, revenue by 10%.
- Deployed serverless models via AWS Lambda; cut inference time by 5.5%.
- Built CI/CD (GitLab, Docker, K8s), developed distributed GPU training and model quantization (TorchScript, ONNX).

AI Research Scientist (Contract), HeHealth Inc. San Francisco, CA Feb–Apr 2022

- Improved model accuracy by 7.25% via synthetic data (Dataset-GAN) and few-shot learning (PyTorch, Tensorflow).

ML Engineer, Wiseyak Inc. Bellevue, WA Oct 2020–Oct 2021

- Managed a cross-functional AI team, driving an 8.25% improvement in the accuracy of disease recognition models for AI-assisted medical diagnosis, which led to 4.12% improvement in customer satisfaction rate.
- Developed and optimized medical image diagnosis pipeline that reduced false positives by 60%, leveraging custom machine learning pipelines from scratch tailored for in-house use.

PROJECTS

- **End-to-End MLOps Pipeline**: Image classification on AWS Sagemaker (GitHub).
- **Realtime Data Streaming**: Used Airflow, Kafka, PySpark, Docker, Cassandra for real-time pipelines (GitHub).
- **Self-Driving Car**: Minimalist autonomous vehicle (Deep Learning, PyTorch) (GitHub).
- **Handwriting Recognition**: Built OCR with 3.04% CER for handwritten text (GitHub).
- **Autonomous Tractor**: Led design integrating LIDAR, GPS, Sensors, RGB-D Camera (GitHub).

LEADERSHIP & ACTIVITIES

President, MSU AI Club, Mississippi State University Jan 2024–Jan 2025

- Organized hands-on workshops on **Neural Networks**, **MLOps**, and **Generative AI**, alongside coordinating coding competitions, lab tours, and AI seminars to foster collaboration and AI education within the university community.
- Organized a coding competition in which participants built an image classifier to classify campus buildings, promoting real-world AI applications and model development.

SKILLS

Programming:	Python · R · Java · C++ · Next.js · Node.js · TypeScript · Scala · Bash · SQL
ML/AI:	PyTorch · TensorFlow · Scikit-learn · Keras · PyTorch-Lightning · HuggingFace
MLOps:	Kubeflow · MLflow · Airflow · DVC · ZenML
Cloud:	AWS (S3, Lambda, EC2, Sagemaker, CDK) · Azure · GCP
Data Eng:	PySpark · Airflow · Kafka · Zookeeper · Cassandra
Deployment:	Docker · Kubernetes · Git · Jenkins · GitLab CI · FastAPI · Flask
Other:	Model Deployment · Quantization · Pruning · Hyperparameter Tuning · Distributed-GPU Training · Machine Learning · Deep Learning · Computer Vision · NLP · LLM · Data Analysis · Data Visualization · Data Science · AutoML