OMKAR POPATRAO SARDE

Machine Learning Engineer

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EDUCATION:

Master of Science – Computer Science **December 2021** (*Anticipated*)

Rochester Institute of Technology *Rochester, NY*

- Achievements: Graduate Merit Scholarship; GRE: 320/340; GPA: 3.48 / 4.00
- Courses: Algorithms Analysis, Object-oriented Design, SDLC, Machine Learning (ML), Data Science

Bachelor of Engineering – Mechanical Engineering **May 2017**

Savitribai Phule Pune University *India*

WORK EXPERIENCE:

Graduate Research Assistant **July 2020 – February 2021**

Rochester Institute of Technology *Rochester, NY*

Software Stack: *Python, Tensorflow, NLP, ML, CNN, GAN, VAE, Segmentation, Classification, Recognition*

- Facilitated activity recognition research by **developing a dataset of 1000+ videos over 5+ categories by programming web crawlers**; enhanced data collection speed by 40%.
- Implemented **video-to-text models to annotate the dataset using Faster RCNN + LSTM**; successfully generated vocabulary for 100+ objects achieving 71.8 BLEU score.

Machine Learning Engineer **June 2017 – July 2018**

Horizon Geospace *India*

Software Stack: *Python, Java, R, SQL, Tensorflow, Hadoop, Tableau, NLP, ML, Statistical Modeling, SCRUM*

- Engineered hypothesis testing, A/B testing; built scalable ML and Deep Learning models to deliver inferences for 25 Proof of Concepts (POCs); POCs **resulted in onboarding of 22 new customers.**
- Devised **24 ETL pipelines to enable analytics at scale**; reduced decision-making time by 20%.

Engineering Intern **August 2016 – May 2017**

Defense Research and Development Organization HEMRL *India*

Software Stack: *Python, Java, Pytorch, Scikit-learn, NodeJS, React, SDLC, Unit-Testing, Agile Methodology*

- Collaborated with scientists to replace testing of propellants with computer vision-based solution using CNN + GRU models; **system simulated and predicted pressure effects with 83% acc.**
- Enhanced code **coverage from 67% to 85%** and **test coverage from 63% to 87% using refactoring and unit-testing** to update legacy systems; **saved 110 ms in data load time.**

PROJECTS:

- **Covid19 Case Geo-location Tracker:** Containerized Covid19 data visualization dashboard and case tracking application; utilizes SVM & random forest models to predict cases with 90% acc.
- **Optical Character Recognizer (OCR):** App for handwritten text recognition; uses Line of Sight (LOS) Graph for segmentation, Neural Network for classification; achieved 74% avg. F-measure.
- **Financial Portfolio Optimizer:** Financial stock portfolio optimizer utilizing ARIMA, VAR, and LSTM models to maximize profit and minimize risk; achieved avg. Sharpe ratio of 1.7.

TECHNICAL SKILLS:

- **Languages:** Python, Java, R, JavaScript, SQL (MySQL, PostgreSQL), NoSQL (MongoDB)
- **Tools:** Pytorch, Tensorflow, Scikit-learn, Scipy, Pandas, NodeJS, React, AWS, Hadoop, Docker, Git
- **Proficiencies:** Software Development, Database Management, Design Patterns, Deep Learning