Prakhar Gandhi

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Summary

Senior AI Engineer with 5+ years of experience in Python, ML, and Generative AI. Proven record of building scalable ML pipelines, agentic AI systems, and internal products used by 1000+ users. Strong background in NLP, computer vision, and parallel computing with measurable performance gains. Experienced in mentoring and cross-team leadership.

Education

Birla Institute of Science And Technology Hyderabad, Telangana
Bachelor of Engineering in Electronics and Instrumentation *Jan. 2015 – Feb 2020*

Academic & Professional Development

Coursework: Data Structures and Algorithms, Neural Networks and Fuzzy Logic, Discrete Math for CS, Digital Image Processing
Self Taught Courses: Database Management Systems, Number Theory: Project Euler
Certifications: Deep Learning: Advanced NLP and CNNs, RNNs, LSTMs and GRUs, Bayesian Machine Learning in Python: A/B Testing, Recommender Systems DLRecommender Systems and Deep Learning in Python, CNN in python-Computer Vision **Certificates Link**
Awards: Have received a gold award from Standard Chartered Bank Global Business Services Private Limited as a part of AI/ML Hackathon, Victory League Award in Ericsson

Technical Skills

Programming Languages: Python, C++, JavaScript
Machine Learning & AI: NLP, Computer Vision, Generative AI, RAG, Model Evaluation, Feature Engineering
Frameworks & Libraries: PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, LangChain, Langgraph, Crew AI
Backend & APIs: Flask, Django, REST APIs, Microservices
Data Databases: PostgreSQL, MongoDB, Cloud Firestore, Firebase
Docker, Azure Functions, CI/CD

Experience

Senior AI Engineer (Python Developer - Generative AI) Feb 2025 – Present
Wipro - Ericsson *Bangalore, IN*

- Developed a ChatGPT-style user interface with CRUD features in Dash + SQLite
- Demo presented to 1000+ Ericsson employees.
- Quality Features included Pagination, Dark/Light Theme Toggle, Export to CSV support for tables, Interactive Zoomable/Drillable Graphs (Plotly), Textual/Tabular/Graph formatting.
- Explored skills in Agentic AI like MCP, LLM-Based Evaluation, RAG, pydantic, vector databases, chunking and retrieval, Reinforcement Learning Human Feedback, recursive text splitter, reranker mechanism, langchain, openai-models used GPT-4/3.5.

Senior Software Engineer (Python Developer) May 2024 – Jan 2025
Wipro - Mercedes-Benz *Bangalore, IN*

- managed automation of manual cpp file code generation by doing Parameter and function name extraction of car product cpp files using python and multiprocessing.
- Created a flask app that includes live terminal using socketio and docker integration in end to end GUI.

Data Analyst 2 Aug 2020 – Jan 2024
Standard Chartered Bank GBS Private Limited *Bangalore, IN*

- Developed a flask app to visualize model predictions and flipped classes based on synonym replacement, insertion and deletion of tense words of banking words present in a general spacy dictionary to check the robustness of model to any such attacks.
- Implemented multiprocessing on django microservices by using parallel processing using pandarallel package and decreased the execution time.

- Developed a QA generation pipeline from scratch using the knowledge of competitive programming by invoking the Large Language Models named t5-base-squad of medium parameter size. Speedup the entire process by using parallel processing.
- Automated synthetic dataset generation by doing Multi blending labels of product documents(watermarks, barcodes, seals and other confidential details). This work involved Parallel Processing improved Data Creation for the agreed deliverables from 4 hour to 1 hour per document.
- Implemented McNemar Test via statistical analysis for cross-team members from structured data to compare the performance of 2 classifiers and selecting the best model further integrating it within the champion challenger pipeline.

Projects

NER Explainability Creation | *Python, sklearn, pandas, numpy, plotly, dash* SCB

- Built local and global NER explainability visualizations including entity probability, POS importance, and state transition analysis.
- Implemented an end-to-end NLP pipeline for an ML-based NER explainer search engine.
- Deployed CRFsuite NER explainability using Dash, enabling accurate class-wise analysis at sentence level.
- Designed a scalable Champion–Challenger framework across NER, regression, classification, and object detection pipelines.
- Optimized evaluation metrics and system performance to support pipelines at million-scale data volume.
- Presented model explainability and performance insights to senior leadership.

Image duplicate prediction (Banking) | *Python, pandas, numpy, tensorflow(imagededup), pytorch(detecto), opencv*SCB

- Built ML-based duplicate detection systems for banking PDFs, improving identification of barcodes, seals, and key document artifacts by 80%.
- Developed object detection models for barcodes, watermarks, and signatures using Faster R-CNN with SSIM-enhanced similarity scoring, achieving 85% accuracy.
- Generated analytical visualizations and client-ready reports to communicate model performance and validation results.

Experience with Assignments (External)

Zycus assignment | *Python, pyspark, ML* Zycus

- Built an automated text classification pipeline to classify products on the basis of text reviews provided by the users. **Github Link**
- Improved data processing speed by 91% by creating a parallel computing pipeline to convert a column of paragraphs into Machine Learning pipeline and get the final predictions.
- Filtered out the labels in code to remove NaN labels to improve the final evaluation metrics and finally applied the performance metrics like accuracy, weighted precision, weighted recall, area under curve and f1 score to obtain the final verdict.

Happymonk paper implementation | *Python, pandas, numpy* Happymonk

- created a 3 layer artificial neural network from scratch as a part of research paper provided to me in coding assignment from the knowledge gained from udemy courses and gained 96% accuracy for benchmarks like iris dataset.(code can be run for mnist dataset as well), **Link**

Achievements

Competitive Programming Ranks | *Python, Cpp* Contests

- Red Coder on Atcoder. **Link**
- Three Star on Codechef. **Link**

Leadership | *Python* At SCB, Ericsson

- Mentored a fresher in Ericsson with automation of test cases using robot framework.
- Mentored a junior colleague in SCB with dataset preparation using easy ocr.
- Mentored a senior colleague in SCB as a part of hackathon in visualizing robustness check of ML/DL model at a targetted classwise image level attack and made a opacity test to compare a permutation of two classes at a time by implementing the same from the paper. Further Detected poison in image dataset.