Chirag Nagendra

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SUMMARY

Machine Learning Engineer with **6 years** of experience in designing and deploying machine learning models and microservices. Demonstrated expertise in deep learning, autonomous driving technologies, and optimization of ML algorithms for embedded systems. Proven ability to implement state-of-the-art models using frameworks like TensorFlow, PyTorch, and scikit-learn. Experienced in **architecting scalable cloud infrastructure** and optimizing data pipelines for reliability and speed. Eager to contribute to cutting-edge AI/ML projects in a dynamic team environment.

SKILLS:

- **Certification: Generative AI Leader Professional**
- **Programming Languages:** Python (including Python 3.x, Pandas, NumPy, SciPy), C++, Java, JavaScript, SQL
- **Machine Learning Frameworks:** TensorFlow, PyTorch, Keras, scikit-learn, MXNet
- **Deep Learning:** CNNs, RNNs, Foundation Models, LLMs, GANs, Diffusion Models
- **Database Management:** SQL (MySQL, PostgreSQL, MS SQL Server, SQLite, ChromaDB), NoSQL (MongoDB), Supabase.
- **Cloud Technologies:** AWS (EC2, S3, RDS), Azure, Google Cloud Platform
- **DevOps Tools**: Docker, Kubernetes, Terraform, Jenkins, Ansible, Git
- **API Development:** RESTful Services, GraphQL APIs
- **Agile Methodologies:** Agile, Scrum

EXPERIENCE:

Machine Learning Engineer - SOLTECH, Boston, MA **Dec 2024 - Current**

- Developed and fine-tuned deep learning models to enhance image recognition and classification for products, improving the accuracy of automated product tagging by **20%**.
- Integrated and optimized large-scale language models to enhance natural language processing capabilities for pet-related customer queries, improving response accuracy and speed.
- Designed algorithms for analyzing and predicting customer behavior patterns based on purchase history, enabling targeted marketing strategies and increasing customer engagement by 15%.
- Utilized TensorFlow and PyTorch to build and deploy custom models for real-time inventory management and demand forecasting, resulting in a 10% reduction in stockouts.
- Led the development of a GraphQL-based API for efficient querying of pet product data, resulting in a 25% improvement in data retrieval speed for user-facing applications.

Lead Software Engineer - ANAMII (Zürich, Switzerland), Remote **Dec 2020 - Nov 2024**

- Led the design and implementation of Python-driven front-end solutions using **Vue.js and Nuxt.js** for real-time **risk monitoring**, improving UI responsiveness and accelerating decision-making for risk analysts by **20%**.
- Improved and deployed scalable ML models for predictive maintenance and operational optimization, utilizing Python, TensorFlow, and scikit-learn.
- Implemented Spark and Hive for processing large datasets from the company's extensive customer and inventory databases, reducing data processing times by 15%.
- Enhanced infrastructure using Terraform for automated deployment of machine learning environments, ensuring consistency and reliability in model training and deployment.

Artificial Intelligence Engineer - Infosys, India **Sep 2019 - Nov 2020**

- Attained **85%** accuracy in mobile-based skin disease detection by implementing **TensorFlow** and **convolutional neural networks**, effectively enhancing diagnostic precision and contributing to advancements in healthcare technology.
- Collaborated with a team of data scientists to develop noise reduction algorithms using **Python** and **scikit-learn** for heart condition classification, enhancing diagnostic accuracy by **10%.**
- Improved COVID-19 lung classification accuracy by **20%** by implementing and ensemble machine learning and deep learning models in **Python**, utilizing **CNNs** for COVID/Not-COVID **X-ray analysis.**

EDUCATION:

University of Massachusetts, Boston **Jan 2023 - Dec 2024**

Master of Science in Information Science *(Major: Machine Learning)*

Vidya Vardhaka College of Engineering, India **Jul 2016 - May 2020**

Bachelor of Engineering in Computer Science

PROJECTS:

Brain Tumor Recognizer App **Microsoft Azure Hackathon**

- Developed a real-time AI model for 2D brain MRI classification using TensorFlow Lite and Azure's Custom Vision Service.
- Implemented Azure Machine Learning for automated model training and deployment, boosting efficiency by 20%.
- Integrated the TensorFlow Lite model into an Android app for mobile healthcare via smartphone camera.

Skin Disease Detector App **Google DSC Hackathon**

- Managed development of a skin disease detection app during a 24-hour hackathon, utilizing TensorFlow Lite for real-time classification.
- Preprocessed and augmented Harvard skin disease images with OpenCV, achieving 82% accuracy through model tuning.
- Integrated the model into an Android app for disease classification and finding nearby dermatologists.