Pradhyumna Nagaraja Holla

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📞 (551) 235-3713 • STEM OPT (Eligible 3-years)

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Professional Summary

Software Engineer with 3+ years of experience building AI-driven applications and scalable backend systems using Python, AWS, and TensorFlow. Skilled in NLP, deep learning, and cloud computing, I am eager to contribute to innovative SDE and AI/ML intern projects.

Education

Stevens Institute of Technology   *Hoboken, NJ*
Masters in Computer Science   September 2024 - May 2026
Concentration: Machine Learning
Relevant Courses: Mathematical Foundations of Machine Learning, Algorithms, Machine Learning Fundamentals and Applications, Artificial Intelligence, 3D Computer Vision, Health Informatics, Statistical Machine Learning, Natural Language Processing.

Jyothy Institute of Technology   *Bengaluru, India*
Bachelor of Engineering in Information Science   August 2017 – July 2021

Skills

- **Programming Languages:** Python, SQL, JavaScript, TypeScript, C, C++, C#, Dart, Java
- **Machine Learning:** TensorFlow, PyTorch, Scikit-Learn, PySpark, Pandas, NumPy, OpenCV
- **Web Development:** HTML/CSS, Django, Flask
- **Cloud & Tools:** AWS (Lambda, SAM, API Gateway, DynamoDB, S3, SES, EventBridge, EFS, SageMaker, Bedrock, EC2, ECR), Databricks, LangChain, LangSmith

Experience

Stevens Institute of Technology   *Hoboken, NJ*
Research Assistant - Natural Language Processing Lab   December 2024 - Present

- Conducting research on Large Language Models (LLMs) with focus on enhancing capabilities through external tool integrations
- Implementing and evaluating various architectures for LLM integration with internet access and external APIs
- Contributing to a research paper on real-time drift monitoring in NLP, proposing novel methods using reconstruction, classification, and normality losses to enhance model performance and reliability

AntStack Inc   *Bengaluru, India*
Member of Technical Staff - 2   March 2022 – July 2024

- Built a GPT-4 chatbot integrated with Google Suite, Meetup, and Jira, handling 10,000+ user queries monthly for a European client
- Developed monitoring processes for Databricks, reducing pipeline failure response time by 30% for a Singaporean company
- Designed a solution for executing ML Algorithms in the backend, and sending plots to the front end for a product based company
- Developed a Natural Language Processing module for a Dispute Resolution project including complaint summarization for a law firm client
- Developed a Proof of Concept for fraud detection using Machine Learning and Rule-Based Systems on Databricks
- Authored technical blogs on trending technologies to boost company's digital presence and client acquisition

Queppelin Technology Solutions   *Bengaluru, India*
Application Developer   May 2021 – February 2022

- Developed a TensorFlow-based music genre classifier web app, achieving 85% accuracy and deployed on AWS EC2
- Eliminated 5,000+ duplicate product entries across Excel files, saving 10 hours of manual work weekly for a news network
- Led and mentored 5 interns, resulting in 3 successful POCs and upskilling in TensorFlow and React
- Engaged in various internal company projects

Queppelin Technology Solutions   *Bengaluru, India*
AR-AI Intern   October 2020 – April 2021

- Developed POCs demonstrating human body segmentation on Augmented Reality using Tensorflow, TensorflowJS and React
- Implemented an interactive 3D visualization project using Three.js and AR.js, showcasing immersive web-based augmented reality experiences with marker-based tracking
- Built 4+ Python and Data Science POCs, leading to a full-time role offer

Certifications

- **Google Cloud Professional Machine Learning Engineer**
  Certification Link
- **Coursera Deep Learning Specialization**
  Certificate Link
- **Coursera DeepLearning.AI TensorFlow Developer**
  Certificate Link

Recognitions & Achievements

- Part of AWS Community Builder Program (Machine Learning) since 2023
- Mentored and Co-hosted "GAMEATHON", an inter-college game development competition at Jyothy Institute of Technology (09/2019, 11/2020)
- Received Recognition Award for Marketing Efforts at Jyothy Institute of Technology for representing the college at education summits(2018 - 2019)

Technical Writing

Authored technical blogs on AWS Machine Learning, Generative AI, and Cloud Computing:

- AWS Machine Learning - Extract Medical Insights with Amazon Comprehend Medical
- AWS Machine Learning - Build, Train and Deploy a Serverless Image Classifier using Amazon SageMaker, AWS Lambda and EFS
- OpenAI Embeddings, GPT-3.5, Pinecone and AWS Lambda: Building a Serverless QA Chatbot
- OpenAI + DynamoDB: Build a Conversational Chatbot with LangChain
- Start the Party! Build AI Apps Seamlessly with AWS PartyRock
- OpenAI + DynamoDB Part 2: Using Partition and Sort Key for Chat Memory with LangChain