**James Brooks**

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Results-driven Senior Software Engineer Team Lead with extensive expertise in deep learning modeling, neural network architectures, and end-to-end machine learning solutions. Adept at leveraging Python, TensorFlow, and GPT-4 to deliver scalable AI-powered applications that drive measurable business outcomes. Proven leader with a track record of mentoring cross-functional teams, optimizing development pipelines using Docker and cloud-native tools, and ensuring robust security and compliance. Passionate about translating complex technical challenges into innovative, high-impact solutions aligned with organizational goals.

**PROFESSIONAL EXPERIENCE**

PRI Global, St Louis, MI2022–Present

**Senior Software Engineer Team Lead**

* Led the design and implementation of an AI-powered predictive maintenance platform for industrial IoT devices, utilizing deep neural networks and real-time data ingestion pipelines built in Python and TensorFlow.
* Architected a custom anomaly detection engine using advanced deep learning models (LSTM, CNN) that reduced unplanned downtime by 37% across client manufacturing sites.
* Integrated GPT-4-based natural language interfaces for automated reporting, enabling non-technical users to generate insights and reducing manual analysis time by 60%.
* Developed a secure microservices infrastructure orchestrated with Docker and Kubernetes on AWS, achieving 99.99% uptime and seamless horizontal scaling under peak loads.
* Initiated a cross-team code review process and mentored junior engineers in best practices for machine learning deployment and MLOps workflows.
* Implemented robust data validation and automated CI/CD pipelines using GitHub Actions and Docker Compose, accelerating release cycles by 40%.
* Collaborated with product managers and UX designers to align AI features with business requirements, resulting in a 25% increase in user adoption.
* Innovative Project: Spearheaded the creation of an adaptive energy optimization system for smart buildings—leveraging deep reinforcement learning models in TensorFlow to dynamically adjust HVAC settings based on occupancy patterns and weather forecasts. This solution decreased energy consumption by 22% annually while maintaining occupant comfort.

Mercury Development, LLC, San Francisco, CA2020–2022

**Senior Software Engineer**

* Developed scalable backend APIs in Python to support mobile health applications processing over 150K daily active users.
* Engineered a real-time recommendation engine using deep learning models in TensorFlow, increasing personalized engagement by 28%.
* Containerized legacy services with Docker, streamlining deployment workflows and reducing environment-related incidents by 50%.
* Optimized data ingestion pipelines for sensor data using Apache Kafka and AWS Lambda, cutting processing latency by 35%.
* Collaborated with cross-disciplinary teams to define data privacy protocols in compliance with HIPAA standards.
* Mentored five junior developers on deep learning best practices, code quality standards, and Agile methodologies.
* Conducted security audits on RESTful APIs, identifying vulnerabilities and leading remediation efforts that improved compliance posture.

Rightpoint, Chicago, IL2018–2019

**Senior Software Engineer**

* Designed end-to-end machine learning workflows to automate document classification tasks for enterprise clients using Python and TensorFlow.
* Reduced model training times by 45% through distributed training approaches on Google Cloud ML Engine.
* Built RESTful APIs for ML model serving using FastAPI and deployed them as Docker containers for consistent staging/production parity.
* Implemented role-based access controls (RBAC) to secure sensitive endpoints within cloud-hosted applications.
* Worked closely with UI/UX teams to translate technical concepts into intuitive user experiences for analytics dashboards.
* Led sprint planning sessions as Scrum Master, consistently delivering features ahead of schedule while maintaining code quality.

inoxoft, Philadelphia, PA2016–2018

**Software Application Developer**

* Developed core modules of a SaaS analytics platform using Python (Django) and PostgreSQL serving over 10 enterprise customers.
* Integrated third-party APIs for data enrichment and visualization within client-facing dashboards.
* Automated testing workflows with PyTest and Jenkins CI/CD pipelines to ensure high code reliability.
* Participated in requirements gathering sessions with stakeholders to define project scope and deliverables.
* Contributed to migration of monolithic applications to containerized microservices architecture using Docker.

**SKILLS & OTHER**

**Technical Skills**

* Python
* TensorFlow
* Deep Neural Networks
* Machine Learning
* GPT-4
* Docker
* Kubernetes
* FastAPI
* PostgreSQL

**Cloud & DevOps Tools**

* AWS
* Google Cloud Platform
* Docker Compose
* GitHub Actions
* Jenkins
* CI/CD Pipelines

**Development Methodologies**

* Agile (Scrum)
* MLOps
* Test-Driven Development (TDD)
* Code Review
* Continuous Integration

**Soft Skills & Leadership**

* Team Leadership
* Cross-functional Collaboration
* Mentoring & Coaching
* Problem Solving
* Effective Communication

**EDUCATION**

The University of Texas at Dallas**,** Dallas, TX2011–2014

**Bachelor of Science in Computer Engineering**

**CERTIFICATIONS**

**AWS Certified Solutions Architect – Associate** 05/2020