Lane Hale

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Summary

Software Engineer with 27 years of experience in high-performance transaction systems and embedded mainframe development, now upskilling in C++, Python, and AI/ML. Proficient in SDLC, object-oriented design, Linux environments, and Git-based workflows, with hands-on project work in PyTorch and Hugging Face Transformers. Applying deep technical problem-solving and systems thinking to complex software challenges in aerospace and beyond.

Work Experience

Customer Service Associate
June 2025 - Present

King Soopers

- Delivered consistent, user-focused service in a high-volume retail environment, supporting customer satisfaction through effective communication and problem resolution
- Applied attention to detail in inventory management tasks, ensuring accuracy and compliance with operational protocols relevant to software QA processes
- Maintained strict adherence to safety and sanitation standards, demonstrating reliability and process discipline in day-to-day operations

Warehouse Associate (Temporary)
May 2025 - June 2025

Central Oceans

- Supported warehouse operations in a high-volume logistics setting, contributing to efficient inventory handling and order fulfillment
- Collaborated within teams to streamline processes, reflecting Agile principles and operational coordination skills
- Ensured accuracy in fulfillment tasks, applying problem-solving abilities relevant to data validation and system support

Software Developer, Air Search – Fares & Shopping
April 2017 - December 2024

Travelport (via Tata Consultancy Services)

- Developed high-performance applications in C, Prolog, and zTPF Assembler for global airline reservations, processing millions of transactions with 99.99% uptime
- Designed rule-based fare logic using Sicstus Prolog, enhancing decision-making in pricing and shopping systems on GDS platforms
- Built and maintained CI/CD pipelines with Perl and Jenkins, supporting Agile environments and defect-free deployments
- Mentored developers in zTPF and Prolog, promoting knowledge transfer and team-wide technical growth
- Debugged and resolved complex mainframe issues using vim, gdb, grep, and logging tools in Linux environments

Software Developer, Payment Solutions & Air Pricing

June 2000 - April 2017

Sabre Holdings

- Optimized zTPF transaction workflows, reducing response times by up to 30% and saving $5M through system-level innovations
- Developed C++ and Java integrations for payment and check-in systems using JSON and SOAP APIs in cross-functional teams
- Led data processing and ETL development in C and SQL for back-office systems handling over 300 million transactions annually
- Achieved 100% success rate for production changes over 857 days in Java and zTPF environments, demonstrating high software reliability
- Applied object-oriented concepts and SDLC best practices across embedded and open systems in a mission-critical environment

Software Developer, GlobalFares Development

January 1998 - June 2000

Galileo International

- Enhanced zTPF Assembler applications for international fare pricing, resolving over 75 issues in first year of employment
- Led a resource-saving rewrite of stopover/connection logic across 50+ segments, earning rapid promotion within 18 months
- Developed tools and specifications for offshore teams, improving efficiency in zTPF development and testing processes

Additional Experience

Projects

December 2024 - Present

- Built a PyTorch-based airline chatbot using BERT (Hugging Face) with 85% real-world intent accuracy, applying NLP and API integration skills
- Preprocessed 1400+ travel queries using Python and NLTK, incorporating regex parsing with real-world flight data from Kaggle
- Integrated FlightAware and Expedia APIs for real-time flight status and multi-leg booking, demonstrating microservices and ETL workflows
- Trained EfficientNetB2 and ViT-B/16 computer vision models on Food101 with 97% accuracy and deployed via Hugging Face Spaces
- Developed C++ Unreal Engine game code for a 48-hour global game jam, implementing vector math and randomization systems

Skills

- **Languages:** C++, Python, Java, zTPF Assembler, Prolog
- **Tools:** Git, Jenkins, GitLab CI/CD, Docker, Spring Boot
- **Platforms:** Linux, AWS, Hugging Face, Gradio, AeroAPI
- **Concepts:** Object-Oriented Design, SDLC, MLOps, API Integration, Embedded Systems

Education

M.S., Computer Information Systems
Colorado State University

B.M., Music Composition
Brigham Young University

Professional Development

- Hugging Face NLP Course | July 2025
- learnpytorch.io: Hands-On PyTorch Course | June 2025
- IBM Artificial Intelligence Fundamentals Certificate | June 2025
- IBM z/OS Mainframe Practitioner Certificate | April 2025
- SAFe Practitioner Certificate | September 2020
- Python Data Science and Statistics courses | August 2019 - September 2020
- Prolog course | February 2019
- Udemy AWS Developer course | October 2021