



SUMMARY

Results-driven Full Stack & AI/ML Engineer with extensive experience in machine learning and software development. Proficient in building scalable applications and optimizing models for high-dimensional data. Demonstrated ability to lead cross-functional teams and deliver innovative solutions, ensuring alignment with industry trends and client needs.

SKILLS

- **FULL-STACK DEVELOPMENT :**
React, Next.js, TypeScript, JavaScript, Vue.js, Angular.js, Svelte & SvelteKit, Node.js, Express.js, Fastify, Python, FastAPI, Django, C# / ASP.NET Core, REST APIs, Supabase, Redis, Microsoft 365, Power Platform, NetSuite / SuiteScript 2.1, Salesforce, WebSocket, Webpack, gRPC, Vite, MongoDB, PostgreSQL, GraphQL, RabbitMQ, Jest, Playwright, Cypress,
- **MACHINE LEARNING & AI :**
TensorFlow, PyTorch, Scikit-learn, Keras, JAX, Python, NLP/GPT, Computer Vision, Model Deployment, MLOps, Anomaly Detection, Feature Engineering, Signal Processing
- **CLOUD & INFRASTRUCTURE :**
AWS, Azure, GCP, Docker, Kubernetes, CI/CD, Terraform, PostgreSQL, DynamoDB
- **DATA & SCIENTIFIC COMPUTING :**
Spark/PySpark, SQL, Pandas, BigQuery, MATLAB, C++, OpenMP, MPI, Distributed Computing
- **SPECIALIZED DOMAINS :**
Medical AI, Computer Vision, HPC, Hyperspectral Imaging, Finite Element Analysis

LANGUAGES

- English | Native

CONTACT INFORMATION

✉ jackson2026andrew@gmail.com

🏠 Palmdale, California, USA

📞 (213)-315-3046

🌐 <https://www.linkedin.com/in/andrejacks>

Andrew Jackson

EXPERIENCE

SENIOR AI ARCHITECTURE & TECH LEADER
APR 2025 - AUG 2026
HV VISION. CARLSBAD CITY, CA.

Developed ML pipeline for hyperspectral imaging predictions. Engineered models for high-dimensional feature spaces while maintaining physics-based validity. Collaborated across diverse stakeholder groups including farmers, agronomists, hardware engineers, and executive leadership.

TECH LEADER & SENIOR SOFTWARE ENGINEER JAN 2020 - FEB 2025
CODECADEMY. NEW YORK CITY, NY.

Led comprehensive full-stack curriculum covering Python, SQL, NoSQL, React, Redux, Next.js, SvelteKit, and Go. Evaluated coursework standards and coached hundreds of students on scalable, well-architected system design. Mentored engineers across core programming competencies and architectural best practices.

Architected end-to-end fraud detection system for Twitter brand impersonation monitoring; integrated Google Workspace APIs to streamline legal team operations and case documentation. Rearchitected backend infrastructure, migrating from Cloudflare Workers (key-value storage) to DynamoDB + S3 with automated API orchestration, reducing operational overhead and improving scalability. Built Web3 smart contract integrations enabling direct customer interactions with blockchain protocols.

Technical expertise spans full-stack development, system architecture, cloud infrastructure, and blockchain integration. Proven ability to design production systems, mentor technical teams, and deliver high-impact solutions across fintech, fraud prevention, and decentralized applications.

SENIOR MACHINE LEARNING & HPC SOFTWARE DEVELOPER
MAR 2014 - OCT 2019
HEXAGON MANUFACTURING INTELLIGENCE
. NORTH KINGSTOWN CITY, RI.

Architected and deployed production ML systems replacing physics-based simulations for automotive engineering. Engineered high-performance parallel linear system solver achieving 1000x speedup through sparse direct solvers and iterative methods (PCG, algebraic multigrid). Developed proprietary sparse/dense C++ linear algebra library with scientific computing optimizations and published peer-reviewed research on springback phenomenon prediction.

Built end-to-end ML pipelines processing massive healthcare datasets (financial records, discharge data, patient outcomes). Developed predictive models for insurance risk, readmission rates, and patient segmentation. Scaled data processing with PySpark and GCP Compute Engine; led multidisciplinary teams through model development, validation, and production deployment.

SOFTWARE ENGINEER INTERN JUN 2013 - JAN 2014
STARBUCKS. SEATTLE CITY, WA.

Built live KPI dashboard scraping metrics from Starbucks database and displaying daily changes to C-level executives. Created live sentiment dashboard streaming tweets, applying NLP for sentiment analysis, and computing daily averages to track public perception over time.

PHD RESEARCHER MAR 2008 - FEB 2013
UNIVERSITY CALIFORNIA SAN DIEGO. SAN DIEGO CITY, CA.

Developed mathematical models predicting complex nonlinear systems behavior (fluid-structure interaction, cardiovascular dynamics, weather forecasting). Built high-performance numerical software for solving nonlinear differential equations. Managed supercomputing cluster pipelines; processed and analyzed terabyte-scale results using OpenMP and MPI. Designed and performed experiments validating software predictions. Developed ML meta-models for forecasting without heavy simulations. Taught numerical methods, programming, mathematical modeling courses. Published results in journals and conferences.

EDUCATION

BACHELOR OF COMPUTER SCIENCE FEB 2004 - DEC 2008
UC SAN DIEGO. SAN DIEGO CITY, CA.

CERTIFICATES & COURSES

Kubernetes Application Developer (CKAD)

Deep Learning Specialization

TensorFlow Developer

Google Cloud Professional ML Engineer

AWS Certified Solutions Architect

AWS Certified Machine Learning

Azure Data Scientist Associate

Natural Language Processing

Professional Engineer (PEng)