

Jeremiah Harvey

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EXPERIENCE

Full-Stack Software Engineer & Founder | Cloakscreen Technologies, LLC

February 2025 - Present, Remote, United States

- Built a novel web technology to blind AI agents and AI-based cheating tools (Cluely, Interview Coder), incorporating methodologies from human perception and temporal motion constraints of hardware.
- Introduced the world's first web protection against AI, combining DRM + browser EME APIs, with a "trap door" approach and no detriment to user accessibility or experience.

Sr. Software Engineer (Contract) | The Walt Disney Company

April 2024 - February 2025, Remote, United States

- Implemented a three-tier recommendation engine with LightFM (CF library) incorporating weighted signals and progressive data enrichment via Snowflake-hosted interaction data (ride participation, guest preferences, and "must-dos"), achieving highly personalized recommendations and projecting significant revenue lift through increased guest spending.
- Engineered a cruise recommendation model using PyTorch, TF-IDF, and semantic algorithms to deliver personalized itinerary suggestions based on Snowflake-derived guest preference patterns, creating a scalable ML solution anticipated to boost booking conversions.
- Built a park analytics dashboard ingesting Snowflake-aggregated guest interactions to reveal attraction preferences and visualize traffic patterns, enabling operational planning and resource allocation.
- Constructed an ETL pipeline using Airflow and Celery to transform raw guest data from Snowflake S3-staged tables into insights, enabling cross-park visitor behavior analysis.
- Developed a data visualization application using Streamlit and NetworkX to map guest journey patterns, identifying clusters leveraging Snowflake-computed schemas and movement flows.
- Led machine learning integration planning across business units, creating technical frameworks and Snowflake-aligned data share protocols for future production systems.

Full-Stack Software Engineer | adMixt

March 2023 - April 2024, Remote, United States

- Engineered a precision-based model routing system that selectively directs queries to appropriate LLMs using Python services deployed on AWS Lambda, improving decision accuracy by 30%.
- Implemented real-time data streaming architecture using AWS Kinesis and Firehose to capture and process advertising performance metrics, enabling sub-minute insights for reporting dashboards.
- Developed a sophisticated multi-tier account validation system utilizing Python APIs with services running on AWS Lambda and data stored in AWS databases, increasing financial compliance by nearly 40%.
- Launched a user interface for managing campaign rules with full CRUD functionality, supported by Python APIs running on cloud infrastructure, streamlining workflow efficiency by 32%.
- Architected Prism, a marketing analytics platform consolidating creative performance data across ad formats, utilizing AWS CloudFormation for infrastructure deployment and Python for data processing, reducing reporting time by 63%.

Lead Software Developer & Support Engineer | CitizenNet, A Condé Nast Company

February 2021 - March 2023, Remote, United States

- Developed a data analytics dashboard utilizing Python back-end logic and integrating data from Elasticsearch, providing clients with insights into campaigns across digital channels, with data processed on AWS.
- Designed a scalable data ingestion system using AWS Kinesis streams to capture social media metrics in real-time, transforming raw data via Firehose into analytics-ready formats for business intelligence.
- Established CI/CD pipelines using both GitHub Actions and Jenkins, automating testing and deployment processes for Python applications, reducing integration errors by 44% and deployment time by 30%.
- Improved client acquisition by 23% by developing an ETL pipeline in Python that aggregates data from social insights API into Google BigQuery, leveraging AWS EC2 and S3 infrastructure.
- Mentored a junior developer as leader of our development team, providing guidance on AWS best practices, CI/CD workflows, and system design, which enhanced team performance and reduced deployment issues.
- Automated infrastructure provisioning using AWS CloudFormation templates, ensuring consistent environments across development, staging and production for the analytics platform.
- Improved website loading times by 30% implementing caching techniques and GZIP compression on infrastructure deployed on AWS EC2.
- Developed a PWA (Progressive Web App) of the platform using ReactJS, improving user experience and accessibility on mobile devices.

Full-Stack Software Engineer & Founder | Harvey Full-Stack Solutions

February 2019 - March 2021, Remote, United States

- Modernized a mid-sized tech company's CMS using Node.js and React with services hosted on AWS, achieving 40% improvement in system efficiency and 20% uplift in client satisfaction.
 - Implemented CI/CD pipelines using GitHub Actions to automate testing and deployment workflows, reducing deployment time by 68% and enabling rapid feature delivery for client projects.
 - Developed a real-time data visualization tool for a marketing firm utilizing Python for data processing and APIs, running on AWS EC2, cutting client campaign insight time by half.
 - Established standardized development practices across projects with GitHub Actions for automated code quality checks, test runs, and containerized deployments to AWS environments.
 - Undertook a financial services provider's migration to a cloud-based environment with microservices, utilizing AWS services (EC2, S3, RDS) and Python for service development.
 - Managed the compliance project for a healthcare provider, implementing strict encryption standards and leveraging AWS security features, leading to successful regulation adherence.
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SKILLS

Industry Knowledge: Machine Learning Systems Architecture, Recommendation Algorithms, Data Pipeline Engineering (Python, AWS), Natural Language Processing (NLP), Feature Engineering, Predictive Modeling, Statistical Analysis, A/B Testing Methodologies, Scalable ML Infrastructure (AWS), Real-time Data Ingestion Pipelines (Kinesis), Cloud Native System Design.

ML & Data Tools: ML Frameworks (PyTorch, TensorFlow, LightFM, XGBoost, scikit-learn), Data Processing (Pandas, NumPy, Apache Spark, Dask), Visualization (Streamlit, Plotly, NetworkX, Matplotlib), Vector Databases (Elasticsearch, Redis), Statistical Analysis (Statsmodels, SciPy), Python Data Ecosystem (Scikit-Learn, NumPy), BigQuery, Snowflake

Development & Infrastructure: Cloud Services (AWS: EC2, S3, Lambda, Kinesis, Firehose, CloudFormation, IAM, RDS, SNS; GCP (Vertex, Pub/Sub), Azure), Containerization (Docker, Kubernetes), Workflow Orchestration (Apache Airflow, Celery), Databases (PostgreSQL, Snowflake, BigQuery, Elasticsearch, Redis, MongoDB), CI/CD Pipelines (GitHub Actions, Jenkins), IaC (CloudFormation, Terraform), Version Control (Git/GitHub), MLOps (MLflow), Programming Languages (Python (OOP/IaC), JavaScript, TypeScript), Agentic Coding IDEs (Cursor, Windsurf, Trae, Gemini CLI, Claude Code, OpenHands)

Technical Skills: Recommendation System Design (LightFM, Collaborative Filtering), NLP (BERT, TF-IDF, Text Embeddings), Time Series Analysis, Clustering Algorithms (K-means, DBSCAN), Hyperparameter Optimization (Grid/Random Search), Feature Engineering (EDA, Pipeline Design), ML Model Deployment (AWS Lambda/API Gateway), Real-time Inference Systems (Lambda, Kinesis Streams), Transfer Learning (Pre-trained Models), CI/CD Automation (GitHub Actions, Jenkins), Snowflake Integration (Schema/Schema Modeling), Security Governance (IAM Role Management, AWS Access Controls)
