Nadja Rhodes

Software {Machine Learning} Engineer

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Work Experience

Spotify **Jul 2025 – Present**
Washington, DC

Senior Machine Learning Engineer (Jul 2025 – Present)
• Building the next generation of GenAI features for Spotify's personalized listening experiences.

ASAPP **Jan 2019 – Jul 2024**
New York, NY

Staff Machine Learning Engineer (Nov 2021 – Jul 2024)
• Led ML engineering team of three, in XFN collaboration with a dozen research scientists and product engineers, to launch company's first "agentic" customer support bot for a Fortune 100 client, enabling automation of complex, natural language interactions.
• Led team of four developing company-wide ML training framework used by all (~20) models, implementing standardized pipelines, remote compute management, dataset versioning, model registry, and external tool integration.

Lead Machine Learning Engineer (Jan 2019 – Nov 2021)
• Architected centralized routing layer between applications and ML services, migrating critical NLU components while orchestrating parallel model calls and unifying responses with entity handling and intent classification.
• Led end-to-end development of named entity recognition and entity highlighting service for 1st company voice client; owned domain-specific entity extraction from planning to rollout, delivering 11% increase in entity card hover rates.
• Implemented model observability and monitoring systems for tracking inference performance and automated alerting for model and service quality degradation.

Microsoft **Sep 2013 – Sep 2018**
Redmond, WA

Software Engineer II (Apr 2016 – Sep 2018)
• Pioneered and patented ML efforts developing a task detection prototype for identifying actionable items in text.
• Rebuilt and open-sourced the OneNote Web Clipper on a modern, React-like framework; led client-side telemetry implementation. Led development of Web Clipper ratings prompt, increasing Chrome Web Store rating from 2.73 to 4.44 stars.
• Spearheaded GDPR compliance plan and implementation for exporting OneNote content.

Software Engineer (Sep 2013 – Apr 2016)
• Led development and public launch of OneNote.com/notebooks entry point (4M MAU, 58K daily visits).
• Enhanced backend for OneNote welcome emails and produced data-driven insights on feature experimentation.

Education & Specialized Training

OpenAI Scholar **Summer 2018**
OpenAI *San Francisco, CA*
• Selected for highly competitive scholarship to study deep learning under Dr. Natasha Jaques; focused on language modeling and generative text for NLP.
• Developed and open-sourced deephypebot, a generative language model that creates music commentary on Twitter. (Code, Talk)

B.S. Computer Science **2009 – 2013**
Stanford University, School of Engineering *Stanford, CA*
• Specialized in the Information track, focused on creating, processing, and understanding digital information.

Technical Skills

ML Technologies: PyTorch, PyTorch Lightning, Hugging Face Transformers, spaCy, Jupyter, scikit-learn.

ML Domains: NLP/NLU, Large Language Models, Text Embeddings, Neural Networks, Fine-Tuning, Conversational AI, Multi-Agent Systems, Information Extraction.

Infrastructure: Kubernetes, Distributed Training (Ray), Cloud Computing (AWS), CI/CD, Airflow, MLflow, Docker, Git.

Backend Development: aiohttp/asyncio servers, ML inference APIs, Microservices, gRPC/Protocol Buffers, REST.

Languages: Python, TypeScript/JavaScript, SQL.

Career Transitions & Engagement

Recurse Center (Nov 2024 – Feb 2025): Self-directed programming retreat in a peer-learning environment. Focused on web development, creative coding, and generative AI.

Family Sabbatical (Jul – Nov 2024): Dedicated time for first-time parenting and career path reflection.

Presentations & Conferences: OpenAI Scholars Demo Day (2018, deephypebot), RenderATL (2023), ACL (2019), NSBE (2018), GHC (2016), Y Combinator FFC (2014).

Internships: NTT Communication Science Labs (2012), Google BOLD (2011), Stanford Research (2010).