Austin Phillips

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EDUCATION

Duke University   Durham, NC
Masters of Science   January 2024- May 2025
Computer Engineering (Machine Learning Track)

Duke University   Durham, NC
Bachelor of Science, Engineering   August 2020- May 2024
Majors: Computer Science, Electrical and Computer Engineering

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EXPERIENCE

Palo Alto Networks - Machine Learning Engineer   August 2025-Present
- Designed and deployed real-time AI agents to automate data loss prevention workflows, analyzing plaintext and binary files at scale
- Built end-to-end, production-grade data pipelines from 0→1, owning ingestion,transformation, and infrastructure
- Automated context-engineering pipelines for file corruption analysis, improving detection accuracy and triage speed
- Investigated and resolved customer-reported issues and production bugs, collaborating cross-functionally with product and infra teams
- Tech: Python, GCP, SQL, Google-ADK, Git, YAML

Splunk - *Software Engineering Intern*   4 Internships from 2023-2025
- Built executive dashboards for Senior Directors and VPs to track cell provisioning health and deployment velocity
- Designed metrics pipelines and predictive models to forecast provisioning cycles and identify bottlenecks
- Implemented success metrics for deployment teams, improving operational visibility and workflow efficiency
- Created paved-road onboarding for internal Argo CD infrastructure, accelerating adoption across cloud teams
- Developed heat maps, timeline predictions, and velocity comparisons for large-scale cell deployments
- Improved Real User Monitoring (RUM) data pipelines and customer-facing data presentation
- Designed release-diff analysis tools to notify customers of statistically significant data changes
- Tech: Java, Python, JavaScript, SQL, Kubernetes, YAML, Druid

LinkedIn - *Data Scientist Intern*   May 2022-August 2022
- Analyzed large-scale user and revenue datasets to identify key drivers for revenue prediction and user action optimization
- Built and maintained data pipelines to streamline analysis and experimentation workflow

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PROJECTS

Master's Research: Guided Sheet Music Generation from Text Descriptions using Latent Diffusion
- Designed a latent diffusion pipeline to generate high-resolution, musically accurate sheet music from metadata
- Conditioned generation on rich text prompts describing instrumentation, composer style, and structure
- Implemented VAEs, Stable Diffusion, and Transformer-based encoders for controllable image synthesis
- Tech: Python, Stable Diffusion, VAEs, Transformers, LLMs

Master's Research: Transfer Learning for Edge Computing with Brain-Computer Interfaces (BCI)
- Investigated transfer learning strategies for brain–computer interfaces in federated learning environments
- Analyzed relationships between model depth, transferability, and performance under decentralized constraints
- Implemented and evaluated CNN-based architectures across multiple datasets
- Tech: Python, PyTorch, Skorch, CNNs

Machine Learning Stock Prediction Web Platform with Social Media Sentiment
- Built sentiment analysis model to classify stock-related social media posts
- Developed LSTM/GRU-based models to predict stock price movement using market data and sentiment
- Deployed models via a web platform using FastAPI
- Tech: Python, TensorFlow, JavaScript, FastAPI

TECHNICAL EXPERTISE

- Languages: Python, Java, JavaScript, SQL
- ML/AI: Machine Learning, Deep Learning, AI Agents, Diffusion Models, NLP
- Frameworks: PyTorch, TensorFlow, Keras, Scikit-Learn
- Data & Infra: GCP, Kubernetes, Argo CD, SQL, Druid
- DevOps & Tools: Git, YAML, CI/CD