

Gable Brown

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SUMMARY

A Senior Machine Learning Engineer with a Master's in Data Science, and a founded background in software development, currently developing production Machine Learning systems and data pipelines at Mindblazer. With expertise in PyTorch, TensorFlow, and object detection models, plus a proven track record of deploying scalable solutions at Wells Fargo and Disney, I bring strong technical leadership and cross-functional collaboration skills to drive AI innovation. With proficiency in Python, Go, ML/AI frameworks, and cloud infrastructure, I am well equipped for the cutting-edge projects at You.

SKILLS

- **Programming Languages:** Python, SQL, Bash, Go, JavaScript, Julia, Rust, Java, R
- **Technologies and Tools:** Kubernetes, Docker, Terraform, Ansible, GitHub Actions, Airflow, Cloudflare Workers, AWS (Lambda, EC2, S3, RDS, VPC, IAM), OpenStack, PostgreSQL, MongoDB, Spark, PyTorch, TensorFlow, Snowflake

WORK EXPERIENCE

Senior Machine Learning Engineer

Mindblazer

Feb 2024 — Present

Remote, NC

- Built a local-first data synchronization system using ElectricSQL, PostgREST, and PostgreSQL with a Swift and Go client for real-time sync between cloud databases and local SQLite instances, including containerized backend services and Terraform infrastructure provisioning.
- Trained and deployed object detection models using PyTorch and Meta-DETR that improved product facing verification accuracy and reduced manual audit time by 65% for retail clients.
- Implemented a CI/CD pipeline with GitHub Actions that automated SBOM generation and vulnerability scanning, reducing security review cycles from 5 days to under 2 hours while identifying and resolving 12 critical vulnerabilities in the first month.
- Developed a serverless REST API using Cloudflare Workers that reduced API response times by 40% and cut infrastructure costs by 60% compared to the previous container-based solution, while handling 1.2M+ monthly requests with 99.99% uptime.

Software Engineer

Viasat

Nov 2021 — Nov 2023

Remote, NC

- Led the development of an automated testing portal that reduced satellite network test execution time by 75% (from 2 hours to 30 minutes per test cycle) and increased test coverage by 40% through Python and Go microservices on Kubernetes.
- Automated infrastructure provisioning with Terraform and Ansible, reducing environment setup time from 3 days to 45 minutes and enabling 30% faster onboarding for new team members.
- Designed Airflow DAGs that processed 1TB+ of daily telemetry data and improving data pipeline reliability to 99.9% uptime.

Software Engineer

Wells Fargo

Jul 2020 — Oct 2021

Remote, NC

- Designed an internal statistical toolkit using Python (SciKit Learn, Pandas, NumPy, PySpark, PyTorch) and TensorFlow, implementing machine learning models for risk assessment and decision-making.
- Built and deployed a telemetry logging data warehouse using PostgreSQL with gRPC integration, developing Python APIs for data access and implementing data visualization dashboards.
- Utilized SQL for complex data analysis and reporting, creating automated data pipelines to process and analyze large-scale financial datasets efficiently.

Data Engineer

The Walt Disney Company

Jun 2019 — Jan 2020

Orlando, FL

- Automated 20+ manual data processes using Python, reducing reporting time by 85% and eliminating 120+ hours of monthly manual work for the analytics team.
- Led Python training for 25+ SQL/SAS developers, resulting in a 3x increase in team productivity and enabling the migration of 80+ legacy ETL jobs to modern Python-based pipelines.

PROJECTS

Software and Firmware Engineer, OpenPilot, Autonomous Driving Integration Jul 2025 - Present

- Implemented and fine-tuned OpenPilot's neural network models for lane detection, path planning, and vehicle control using PyTorch, optimizing model performance for real-time inference on automotive hardware.
- Developed custom calibration algorithms and safety validation frameworks for autonomous driving systems, including sensor fusion techniques and behavioral prediction models for enhanced decision-making.
- Engineered data collection and model training pipelines for automotive ML applications, implementing vehicle dynamics modeling and control system optimization for improved autonomous driving performance.
- Modified Honda Electric Power Steering (EPS) firmware using Python-based reverse engineering tools to enable enhanced torque control integration with autonomous driving systems.

Solo Developer, PortageRoute, River Navigation App May 2025

- Developed a native iOS application using SwiftUI and MapLibre for displaying and interacting with river navigation data, with a PostGIS/PostgreSQL backend for spatial data management.
- Designed and optimized spatial database schemas in PostGIS, enabling efficient storage and querying of complex river geometries and attributes.
- Created data processing pipelines to import and transform OpenStreetMap data into the PostGIS database, ensuring data accuracy and performance.

Hardware and Software Developer, Smart Coaster (<https://gitlab.com/C1ARKGABLE/smart-coaster>) Aug 2024

- Designed full-stack IoT system from PCB layout to cloud integration, selecting ESP32C6 microcontroller for dual WiFi/Bluetooth capabilities and implementing hardware abstraction layers for sensor interfacing and power management.
- Architected embedded firmware using ESP-IDF and PlatformIO with real-time task scheduling, interrupt-driven sensor processing, and low-power state machines, while developing responsive web interfaces for device configuration.
- Implemented cross-platform communication protocols including Matter/Thread for smart home integration, WebSocket APIs for real-time control, and OTA firmware update mechanisms with version management.

Creator and Full-Stack Developer, Regexle, Daily Regex Puzzle (<https://regexle.com>) May 2024

- Built a daily regex puzzle platform that attracted 1,000+ monthly active users within the first 3 months, with an average session duration of 4 minutes.
- Engineered a serverless backend using Cloudflare Workers that handles 5,000+ API requests daily with sub-50ms response times, while remaining in the free tier.
- Achieved global reach with 10,000+ puzzle completions across 50+ countries after 12 months while maintaining zero operational costs through efficient serverless architecture.

EDUCATION

University of North Carolina at Charlotte May 2021
Master of Science, Data Science Charlotte, NC

University of North Carolina at Charlotte Aug 2020
Bachelor of Science, Computer Science Charlotte, NC