

Tim Williams

Senior Backend Engineer · Data & AI

About

Backend-focused engineer building reliable services and data pipelines at SaaS scale. I design clear APIs, production-grade ETL/ELT on Azure, and Kubernetes-first microservices with strong CI/CD, observability, and testing. Comfortable across Python, C#, and Node — pragmatic, performance-minded, and delivery-oriented.

Experience

Lead Software Engineer / AI Engineer · Canopy

Remote · 2023 — Present

- Own backend architecture for CRM + workflow features; designed clear service boundaries and APIs used by web and internal tools.
- Built Azure-based ETL/ELT (Blob → Data Factory/Synapse/SQL) with incremental loading, idempotent backfills, and observability (logs/metrics/traces).
- Containerized Python microservices and scheduled jobs on Kubernetes; implemented secrets via Key Vault and environment-specific config.
- Drove CI/CD (Azure DevOps/GitHub Actions) with preview environments, automated testing, and schema/version checks for safe deploys.
- Partnered with Product on requirements and delivery; mentored engineers on testing patterns, code reviews, and on-call hygiene.

Python · Java · Reactive Programming (Rx) · C#/ .NET · Node.js · Postgres/SQL Server · Azure (ADF, Synapse, Key Vault, Blob) · Kubernetes · Docker · gRPC/REST · Redis · CI/CD

AI/ML Engineer (Platform Integrations) · Marketstar

Remote · 2022 — 2023

- Integrated LLM-powered summarization and insights into internal management apps; shipped reliable prompt/response pipelines with auditability.
- Built an email intelligence dashboard (thread clustering, action extraction, follow-up suggestions) with service guards and rate limiting.
- Prototyped multi-modal and fine-tuning workflows; stood up GPU-backed training/test queues on Kubernetes for repeatable experiments.

Python · FastAPI · OpenAI/LLM · Postgres · Kubernetes · Celery/Queues · Observability

Senior Data Engineer · Marketstar

Salt Lake City, UT · 2020 — 2022

- Implemented robust ingestion patterns (CDC/incremental) with Data Factory and orchestrated transforms into a governed warehouse.
- Optimized heavy queries and indexing strategies in SQL Server/Synapse; significantly reduced runtime and compute cost.
- Authored internal SDK/utilities to standardize pipeline scaffolding, configuration, and error handling.

Azure ADF · Synapse · SQL Server · Python · Airflow/Orchestration · GitOps

Projects

Direct-to-Provider Email/Calendar/Contacts SDK

Rebuilt a Nylas-style SDK for Google, Microsoft, iCloud, and IMAP using RxJava 1.3 + Vert.x; microservice-ready with backoff, retries, and typed models.

Java · RxJava 1.3 · Vert.x · OAuth · Gmail/Outlook/iCloud · Kubernetes

Questionnaire → CRM Sync (Tax SaaS)

Differs client-submitted questionnaire data against CRM records (e.g., address/phone), proposes updates, and lets staff approve one-click merges.

Python · Postgres · Next.js · ETL · Data Validation

GPU Training Cluster

Kubernetes GPU nodes for fine-tuning domain models; queue-based job runner with metrics/traces, artifact versioning, and reproducible seeds.

Kubernetes · NVIDIA · PyTorch · Observability

.sav Structure Discovery Pod

Kubernetes pod that inspects SPSS .sav files to infer schema/structure for downstream pipelines; exposes results via API and dashboard.

Python · FastAPI · Containers · Data Engineering

Skills

Python · C#/.NET · Node.js/TypeScript · Java (RxJava) · Kotlin · Postgres · SQL Server · Redis · S3 · Snowflake · Azure · AWS · GCP · Vercel · Spark · Databricks · REST · gRPC · OAuth2/OIDC · Kafka · SOAP · Kubernetes · Docker · Helm · Terraform · Active Directory · Airflow · Celery/Queues · RabbitMQ · OpenAI APIs · PyTorch · Hugging Face · RAG · Azure DevOps · GitHub Actions · Testing · OpenTelemetry · Prometheus · Grafana · ELK/Kibana · DataDog · Next.js · TailwindCSS

Contact

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