

Thomas Ryan Broyles

Principal backend engineer

trb.dev
talk AT trb DOT dev
United States

Professional Summary

~20 years industry experience. Varied roles, starting as a junior helpdesk tech in college and evolving over the years to principal back end software engineer.

Currently wearing the hat of an AI evangelist in the workplace, leading the charge on identifying and implementing new use cases for AI as a force multiplier in our org.

Experience with a wide cross-section of languages and operational infrastructure stacks. Lots of microservices, lots of monoliths.

Current primary working stack involves services written in Go and Python, mostly packaged as Alpine based OCI images running in a Kubernetes / Kafka / NATS / Postgres / Mongo environment on Microsoft's Azure cloud.

Technical Skills

AI/LLM Models & Tooling

Hosted models	Anthropic API ■ Azure Foundry ■ OpenAI ■ OpenRouter ■ ElevenLabs
Open-weight models	Qwen ■ MiniMax ■ GPT-OSS ■ Mistral ■ Gemma
Inference engines	llama.cpp / llama-swap ■ vLLM ■ SGLang
Agent Harnesses	Hermes Agent ■ OpenClaw

Languages & Tools

The further up it is, the stronger & more recent it is.

Languages	Go ■ Python ■ Typescript ■ Protobuf ■ Ruby ■ PHP ■ c# ■ VB.Net
DBs	Postgres ■ SQLite ■ MariaDB ■ Redis
Message Brokers	Kafka ■ NATS
OSes	Ubuntu ■ Arch ■ Alpine ■ Debian ■ Mac OS ■ Windows ■ FreeBSD

CI, Orchestration & Clouds

CI	Gitlab Pipelines ■ Forgejo Actions ■ GitHub Actions
Orchestration	Kubernetes ■ Docker Swarm ■ Portainer
Clouds	Azure ■ DigitalOcean ■ Vercel ■ AWS

Experience

Verituity Inc

2022-

Senior Director, Software Engineering

Nov 2023 - Present

- Architected an agentic internal tech support AI chatbot for Slack using the Claude Python SDK, opening the door for Customer Service staff to self-service data research and troubleshooting requests from customers.
- Architected a multi-persona AI code review agent for the company GitLab instance, providing an added layer of protection against common bugs, code smells and security issues.
- Designed a suite of Claude skills covering the company's codebase, business and technical operations, increasing the value and efficiency of Claude for the engineering and product management teams.
- Designed a suite of Claude skills covering the standard procedures for common support tasks, improving the time to resolution of the covered tasks.

Lead Software Engineer

May 2022 - Nov 2023

- Architected a message queue based design for the service of transactions across payment rail boundaries, opening the door to re-use of standard platform services to service multi-rail transactions.
- Architected an extensible payment rail adapter for the servicing of transactions using ISO20022 formats, eliminating the need to build bespoke adapters for each payment rail.
- Designed & implemented a standardized library for the usage of AES-256-GCM encryption in platform Golang services, reducing friction surrounding the usage of strong encryption in the code.
- Designed & implemented a standardized library for the encoding of data into fixed-width formats in platform Golang services using struct tags, facilitating easy construction of services that encode to fixed width.

Senior Software Engineer

Mar 2022 - May 2022

- Designed & implemented a client adapter microservice to validate and load transactions from a Fortune 500 insurance company. The adapter ingests and loads a median of ~10,000 transactions per day from a proprietary format, with a median speed of ~250 records per second.
- Built a comprehensive local debugging environment for the platform's ~40 microservices using Tilt, eliminating ~10 minutes of cloud CI downtime per developer build/test loop.
- Designed & implemented a standardized concurrent execution pipeline library for platform adapter services written in Golang, reducing developer cognitive load associated to the code of adapter services.

Michelin

2014-2022

Digital Solution Developer III

May 2021 - Mar 2022

- Served as chief software architect for the development and implementation of business-oriented IT systems within the North American engineering division.
- Responsible for exploratory research of new platforms and solutions for manufacturing intelligence and execution in the North America zone.
- Lead and championed the use of MS PowerBI as the primary business intelligence platform of North America engineering.

Computer Systems Engineer II

Jan 2020 - May 2021

- Implemented a Kafka data pipeline in engineering information systems, providing nearly real-time information availability.
- Assumed the role of primary JIRA administrator for the central engineering team.
- Expanded the business intelligence solution into a suite of additional tools to publish, synchronize and share project execution information, eliminating an additional 0.25 FTE of administrative overhead.
- Developed a COVID related attendance scheduling system, providing the visibility needed to enforce COVID facility occupancy limits.
- Developed a suite of PowerBI reports and datasets used by the HR department to increase visibility into demographics and competency profiles of the workforce, eliminating approximately 0.4 FTE in manual reporting from Excel based tools.

Computer Systems Engineer

Aug 2014 - Jan 2020

- Responsible for the development and deployment of .NET based SCADA software using c# and OPC in over 12 factories throughout the Americas. Directly participated in all aspects of the deployments, including deployment of servers and software, configuration of OPC connections with equipment PLCs, and configuration and troubleshooting of data exchanges between PLCs and the SCADA system.
- Developed a suite of mobile apps used by partners of the engineering department to manage their issue reports, saving issue assignees an average of 30 minutes of manual communication work per issue.
- Developed a departmental business intelligence solution that eliminated approximately 0.5 FTE of manual Excel report preparation.
- Directly managed the activities of contracted software developers and provided technical coaching to other team members for development projects using the company's internally developed .NET toolkit.

Kyrus Solutions

2013-2014

Systems Integration Engineer

Nov 2013 - Aug 2014

- Used Debian Linux and VMware to develop a portable Point-of-Sale system demo platform for sales reps, cutting in half the amount of equipment needed to provide demos to customers.

TEKsystems

2012-2013

Contract Developer assigned to Michelin NA

Aug 2012 - Nov 2013

- Rewrote and refactored a VB .NET 1.1 SCADA application to C# .NET 4.0. The size of the codebase shrunk by 50%, and brittle text-based error handling was replaced with organized exception handling.
- Re-implemented the Windows CE client component of a manufacturing inventory control platform, to leverage internal caching, improving the average processing time per product unit from 3 seconds to sub 1 second.
- Voluntarily undertook the study of the company's internally developed .NET toolkit and became one of the top experts in its use throughout the Americas.

EmbTrak

2008-2012

Product Support & Development Manager

Jul 2010 - Aug 2012

- Transitioned source control from Perforce to BitBucket and implemented automated CI using Inedo BuildMaster, improving build environment consistency and eliminating manual software package creation.
- Implemented an AWS environment furnishing managed hosting of the company's software product using Citrix MetaFrame. This opened the door for a new sales model for the company's software product.
- Re-implemented the legacy VB6 sales order entry screen of the software product using c#, reducing average time to load an existing sales order from 6s to 2s.
- Implemented peer code review with Atlassian Crucible, reducing the defect rate in production software packages.
- Implemented standardized software QA environments using VMWare ESXi and DeepFreeze, improving the consistency of software test results.

Product Support Manager

Dec 2009 - Jul 2010

- Implemented a customer-accessible help desk solution (JIRA), giving customers more access to see progress on their requests and reducing workload related to delivering manual status updates.
- Created a customer-accessible support wiki (Confluence) to allow customers to self-service common questions, reducing support workload.
- Assisted the development team with the coding of new features for existing software products in accordance with specifications created by the development team leader.

Product Support Specialist

May 2008 - Dec 2009

- Implemented consistent usage of an internal ticketing system (Axosoft OnTime), giving the company better visibility into support workload and reducing customer issues caught in the cracks.
- Voluntarily undertook the study of C# .NET in order to better understand and support the company's software.

Education

Bob Jones University

B.S., Information Technology

2004 - 2008