

Maximiliano Schulkin

The Mind is the matrix of all matter

Experience

- Present – Oct 2024 **Lead Software Engineer, Tucows, Canada, Remote**
"Sr Software Eng. II", domains division
- Lead Development of Registrar onboarding system
 - Built as a microservice to capture data for domains systems
 - FastAPI backend, VueJS client, PostgreSQL database
 - Architected new Reseller's platform
 - Backend built on FastAPI, Postgres and Redis
 - Deployed to AWS
 - integrated into Tucows ecosystem
 - Developed SQL translation internal library
 - Based on PERL SQL::Abstract
 - Released as a private pypi library
 - Mentoring Jr Engineers within Domains team
 - Lead discussions into adoption of AI workflows and projects
- May 2024 – Nov 2023 **Machine Learning Engineer, CustomerOS, Remote**
Lead for machine learning, backend engineering
- Pioneered a data enrichment process using Large Language Models (LLM)
 - Deployed LLM on AWS Sagemaker
 - Built with Go on top of running LLM
 - Enhanced data quality and insights for internal customer profiling
 - Developed an in-app notification system
 - Built with Go and based on top of Postmark
 - streamlined communications between system and users
 - Created a knowledge graph for machine learning models
 - Built with Neo4J
 - boosted interpretability and model synergy
 - Implemented an async worker system
 - Built with Temporal IO and their Go SDK
 - Optimized long-lived workflows for better resource management
 - Launched a real-time backend system for live user collaboration
 - Built using Phoenix/Elixir
 - Enhancement for user experience and engagement.
- Nov 2023 – Jul 2022 **Senior Infrastructure Engineer, Lumos, Remote**
- Refactored the release process from manual to fully automated
 - Improved lead time from 8h+ to 1.5h
 - Defined a hotfix flow to be automated from hotfix branches
 - Architected and implemented the org's Data Pipeline
 - Created Snowflake warehouse
 - Self hosted Airbyte to connect data sources
 - Self hosted Metabase to enable the org to visualize data
 - Refactored terraform code with terragrunt for more organized infra
 - Introduced and maintained the org's k8s clusters

Jul 2022 – **Senior Software Engineer, Mystic AI**, Bath, UK, Contractor
Feb 2022

- Worked on our open source library, Pipeline-ai
- Designed and implemented our internal ML Compute orchestrator system
 - Fastapi server wrapper
 - Internal distributed compute logic built with Celery
 - PGSQL DB cluster on k8s using the Zalando Postgres-Operator
- Designed and implemented our Cloud Infra (GCP, Terraform, ArgoCD, Grafana)
- Implemented a hybrid infrastructure
 - On-prem GPUs clusters and Cloud infra traffic spill-over
 - VPN with peer-2-peer connections using Tailscale

Feb 2022 – **Platform Software Engineer, Delivery Hero**, Berlin, Germany

Mar 2021 Member of the Customer Data Platform squad

- Refactored our Fraud Detection service in Golang (Gin)
 - Designed as a distributed system
 - Integration with Data Lake and DynamoDB
 - Extensible rule engine
- Worked on Data Store's design and implementation
 - Airflow workflows to manage Airbyte connectors
 - Airbyte multiple connector implementations to consume all of the orgs data sources
 - Data stored in AWS Lake Formation and DynamoDB
- Refactored the team CI/CD to use ArgoCD

Mar 2021 – **Research Engineer, ASAPP**, Buenos Aires, Argentina

Dec 2018 Member of the UI Automation research team

- Implemented the infrastructure to train an AI model that learned from thousands of customer support agents.
 - Python server using tornado, dockerized and deployed to Kubernetes cluster
 - Redis cache, Cassandra database, CI/CD with CircleCI and Spinnaker
- Integrated the above service with external CRMs from company's customers
- Designed and implemented an automated browser navigation service
 - Built using Django and running a ML model that built a 'decision-tree like' structure

Senior Stack Engineer, ASAPP, Buenos Aires, Argentina

Member of the Customer Experience Backend team

- Co-Designed and implemented internal framework called treewalk, widely used by the org
 - Enabled product teams to build chatbot conversational flows with a graph-like structure.
 - Built with typescript.
- Joined as 5th member of Asapp Argentina, helped the company scale and develop its culture
- Interviewed and hired over 50 engineers

Dec 2018 – **Full Stack Engineer, Appdirect**, Buenos Aires, Argentina

Apr 2018 Member of the Microservices integrations team

- Designed and implemented microservice in Golang/Go to integrate the org marketplace with GCP
- Implemented frontend key features to enable Godaddy integration by the org marketplace app

Apr 2018 – **Software Engineer, Digodat Analytics**, Buenos Aires, Argentina

Mar 2017 Achieved leadership for the News division and International Projects; Data Analytics

- Managed and planned roadmap for KIA Motors(Portugal)
 - This enabled the org to set a precedent overseas and expand ops
- Managed and planned roadmap for La Nacion and Infobae newspapers
- Designed and developed main internal tool called "Clickodat"
 - This enabled non-tech org members to generate code to measure web pages behavioral metrics
 - Browser extension tool, built with react, nodeJS, GCP and Google Tag Manager
- Implemented Telefonica's and Personal's behavioral data collection system for analysis

Education

Incomplete – **M.Sc. Physics, University of Buenos Aires**, Buenos Aires, Argentina

Jul 2013 The pshysics course offered by UBA is one of the most complete and high quality courses on the subject in the whole of Latin America. It is planned as a bachelor + masters in one condensed course(12 Semesters). Partial Average of 7.84/10. Course Incomplete. Some subjects studied were Quantum Mechanics, Statistical Physics, Electromagnetism

Personal Projects

Ymir Lang	Designed and implemented a high-level programming language simplifying ML model training and deployment. https://github.com/bjornaer/ymir	Hermes DB	Developed a distributed key-value store using Conflict-Free Replicated Data Types (CRDTs) to ensure eventual consistency. https://github.com/bjornaer/hermes
------------------	---	------------------	--

CRDT Go Module Open-source library for building replicated data structures in Go. <https://github.com/bjornaer/crdt>

Computer skills

- Languages** Python, Go, Elixir, JS/TS, C++, Java, Cirq
- Infra Tools** Kubernetes, Terraform, Terragrunt, Chef, Puppet, Ansible
- Databases** PostgreSQL, Elasticsearch, Cassandra, Redis, MySQL, Aurora, DynamoDB
- Cloud** AWS, GCP, Digital Ocean

Publications and Writing

- Otra Coronación de Gloria (in progress)** Analytical history of Argentina (1930–2025), examining political, social and economic trends and proposing policy alternatives.
- Magnus and the last of the Druids (in progress)** Fiction exploring environmental themes, showcasing creative writing.