Pascal Sauerborn

Senior Software / DevOps Engineer | Remote & Hybrid | US & UK Based |

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Senior Backend and DevOps Engineer with 7+ years experience designing and delivering large-scale cloud-native platforms in AWS and Azure. Specialist in Go, Python, Terraform, and CI/CD automation, with proven ability to take ownership of backend and infrastructure delivery from architecture to production to produce high-throughput APIs, data platforms, and automation pipelines, either autonomously or as a part of an Agile team.

Technical Skills

Core Languages: Python and Golang.

Cloud and Infrastructure: AWS, Azure, Terraform, Kubernetes, Docker.

Database Technologies: DynamoDB (single table design), PostgreSQL, Apache Cassandra.

CI/CD and Automation: GitLab CI/CD, GitHub Actions, Terraform, IaC Pipelines.

Other: REST, GraphQL, gRPC, ETL pipelines, RabbitMQ, Graphana, Prometheus, Agile

Work Experience

Omnigen Biodata   Cambridge, UK
Senior Software Engineer   Oct 2022 - Present

Sole backend engineer responsible for architecture, development, and operation of backend systems for the DiscoverMe Study, providing 3M+ health records and ancestry to 200k+ users across the UK and South Africa.

Tech Stack: Python, Golang, Gitlab, Terraform, Docker, PostgreSQL, AWS DynamoDB, S3, Lambda, ECS, Appsync, API Gateway, Stepfunctions, SNS, SQS, Athena, Glue.

• Designed and implemented GraphQL and REST APIs (Python, Go) for participant consent, access to EHR (3M+ records), dispatch & storage of biological sample kits (100k+ samples processed), and linking of sequenced genomic data via ancestry inference pipeline.
• Developed ETL pipelines processing 4TB+ of health and ancestry data from multiple 3rd party data providers.
• Built and maintained GDPR-compliant data storage in DynamoDB (single table design) and PostgreSQL.
• Delivered CI/CD pipelines deploying containerised applications via Terraform to AWS.

- Delivered a datalake for unified reporting and analytics across applications via AWS S3, Glue and Athena.

ZenithAI   Belfast, UK
Senior MLOps Engineer   Feb 2022 - Oct 2022

Delivered infrastructure and tooling to accelerate ML model deployment across AWS environments.

Tech Stack: Python, Terraform, Docker, AWS DynamoDB, S3, Lambda, API Gateway, Security Hub, GitHub Actions.

- Built a Python web framework converting trained ML models into deployable web apps, cutting delivery time from days to hours.
- Delivered a self-service AWS portal for ML researchers to publish and share applications securely.
- Automated provisioning of cloud resources using Terraform and integrated CI/CD via GitHub Actions.

Uniper Technologies   Nottingham, UK
Technical Lead   June 2019 - Feb 2022

Led the core backend team delivering Enerlytics, a global data analytics platform for power generation sites.

Tech Stack: Python, Golang, Docker, Kubernetes, Apache Cassandra, Azure AKS, RabbitMQ, Graphana, Prometheus, Azure DevOps.

- Architected and implemented a Python microservice mesh for ingestion, analysis, and visualization of plant data.
- Migrated platform from Docker Swarm to Azure Kubernetes. improving scalability and reliability.
- Delivered on-premise deployments for clients under strict data-governance requirements.
- Managed CI/CD, Kubernetes clusters, and Apache Cassandra clusters.

Education

University of Nottingham   Nottingham, UK
Bsci in Theoretical Physics & Mathematics   Sept 2016 - June 2019
1st Class with Honours