

Hakim Jonas Ghoula

Data Engineer with a focus on functional programming and scalable solutions

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📄 Summary

Data Engineer with 3+ years of experience designing, optimizing, and managing large-scale data pipelines using Scala, Spark, and Python. Skilled in building robust ETL processes, implementing test-driven development, and leveraging AWS cloud services. Key projects at LiveIntent (acquired by Zeta Global) include Dormant Email Reactivation and PersonID/offline graph pipelines. Currently exploring compiler and language design through a personal functional programming language project in Rust, focusing on type systems and parsing techniques.

🧰 Experience

Professional Experience

Data Engineer

LiveIntent (acquired by Zeta Global in November 2024) | 2022 – Present

Designed and maintained large-scale ETL pipelines using Scala and Spark, improving data processing efficiency.

- ▶ Collaborated on data ingestion and delivery processes for external partners
- ▶ Contributed to Dormant Email Reactivation and PersonID/offline graph projects, supporting business objectives
- ▶ Emphasized functional programming and TDD to create maintainable and reliable code

Technologies: Scala, Spark, AWS, Functional Programming, TDD

Associate Data Scientist

LiveIntent (acquired by Zeta Global in November 2024) | 2022 – 2022

Supported the development of analytical pipelines using Scala-based systems.

Technologies: Scala, Data Analysis

Python Back End Developer

Ocean.io | 2018 – 2019

Developed email prediction and language detection modules for the Growth Intelligence platform.

- ▶ Maintained and optimized internal APIs to ensure seamless data integration

Technologies: Python, APIs, NLP

Front End Developer / Data Engineer

Købstædernes Forsikring | 2017 – 2018

Contributed to the development of a new data model for the insurance customer database.

- ▶ Implemented white-label solutions and managed web projects for external partners

Technologies: Front End, Data Modeling

Research Assistant

LETSMT! / University of Copenhagen | 2012 – 2012

Conducted data acquisition and analysis for an EU-funded machine translation project.

Technologies: Data Analysis, Machine Translation

Independent Web Developer

Self-employed | 2004 – 2010

Designed and built websites and portals for a range of clients.

⚙️ Skills

Key Skills

Languages

- ▶ Scala: Functional & OOP, strongly typed systems, TDD
- ▶ Python: Airflow (DAGs), data processing (Pandas, NumPy), machine learning, NLP
- ▶ SQL: AWS Athena, performance tuning, complex queries
- ▶ Rust: Compiler/language design project & more

Data Engineering & Big Data

- ▶ Apache Spark: ETL, transformations, performance optimizations
- ▶ Apache Airflow: DAG creation, scheduling, orchestration
- ▶ AWS: S3, Athena, EC2, data warehousing, analytics
- ▶ Docker & Kubernetes: Containerization, orchestration, deployment

🗣️ Languages

Danish: Native

English: Fluent

🎓 Education

Education

MSc in IT and Cognition

University of Copenhagen
2014-2016

Bachelor in Philosophy

University of Copenhagen
2008-2011

Diploma in Music Management

The Royal Danish Conservatory
2009-2011

Certificates

- ▶ Python Certified Developer Professional – Superusers (2020)

Technologies: Web Development, HTML/CSS

Projects

valar - Scala Repository

Valar: Type-safe validation for Scala 3 with boilerplate-free derivation via macros. Features error accumulation and fail-fast modes.

Technologies: Scala, data-validation, error-handling, maven-central, scala, scala3, validation

fin - Rust Repository

Finë is a simple, GTK4-based session transition tool for Linux desktops—built in Rust with a functional, modular design.

Technologies: Rust

spore-print (Fungal) - Rust Repository

A Rust library providing a SporePrint trait and derive macro for immutable string representations.

Technologies: Rust