

# Jonathan Alistair Jayes

Data Scientist · Economic Historian  
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Economics-trained data scientist who transforms raw data into actionable intelligence. Expertise in using ML/AI to extract value from previously unusable data sources. Demonstrated success in designing efficient pipelines that dramatically reduce costs.

## Work Experience

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### Data Scientist

Led various data science projects including public finance data collection and analysis project:

- Executed full project lifecycle: planning, bidding, winning, and delivering a comprehensive pipeline to collect, classify, extract and publish public finance data across the African continent
- Developed and maintained over 60 web scrapers to automatically collect PDF budget documents from government institutions and multilateral organizations
- Created a document classification system using multimodal large language models to accurately categorize heterogeneous financial documents according to a custom classification schema
- Built robust metadata extraction workflows and database architecture to store and organize thousands of documents spanning from 2013 to present
- Designed and implemented an internal dashboard tool enabling clients to visualize data coverage and extract insights from the collected financial information

Codera Analytics

12/2022 - Present

### Junior Data Scientist

Created automated Rmarkdown reports, presented a session on code generation for commercialization of data products.

Fathom Data

01/2022 - 03/2022

University of California,  
Berkeley

### Quantitative Analyst

Research assistant to Prof. Barry Eichengreen. Conducted NLP analysis for a study on South Africa's Gold Standard and Great Depression.

06/2020 - 02/2021

FTI Consulting South  
Africa

### Junior Consultant

Led a pro bono project on economic impact assessment, contributed to expert reports in telecommunications, oil, and poultry industries.

03/2019 - 01/2020

## Education

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### PhD in Economic History

Lund University, Sweden

Examining winners and losers of technological change during the electrification in the 20th

century. Thesis supervised by Prof. Kerstin Enflo.

2021 - 2025

- Leveraged cutting-edge technology (LLMs, computer vision, text embedding models) to make historical data sources accessible at scale that would otherwise be impractical to analyze
- Designed and implemented a novel AI pipeline to transform historical biographical dictionaries into machine-readable format, reducing transcription time by 3 months while significantly expanding the observation set beyond previous studies
- Developed diverse methodological expertise across four thesis papers: systematic literature review, cross-sectional historical census analysis, biographical text data mining, and time-series analysis of corporate director networks

Stellenbosch University,

South Africa

### Masters in Economics

Stellenbosch University. Researcher at the Laboratory for the Economics of Africa's Past.

2020 - 2021

- Submitted 'A Century Later: Lessons from the Spanish Flu Pandemic of 1918' to the South African Presidency
- Graduated with distinction
- Published my first paper in World Development Special Issue on Pandemics

University of Cape Town,

South Africa

### Honours in Economics and Bachelors in Social Science

Dean's Merit List. Class medalist in Policy Analysis, Microeconomics, Twentieth Century Industrialization, and Empires and Modernities.

2015 - 2018

## Skills

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### Software

Python, R, SQL, experience with OpenAI / Gemini / Claude API, Google Cloud Functions, GitHub Actions. Learning: Docker.

### Languages

English (Native), Swedish (Intermediate), French (Learning).