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Summary:

I am a senior software engineer with 8 years experience in various industries including consulting, financial services, retail and public sector. Passionate about data and programming in general my main skills are:

1. Software engineering: strong knowledge of Python (8 years' experience), Node.js, JavaScript/TypeScript, Bash, SQL, Lua, Golang. Intermediate in Java, C++
2. Data science: strong knowledge of NLP, econometrics, machine learning and deep learning techniques.
3. Data engineering: GCP/AWS (5 years' experience), Snowflake (3 years), Azure, Airflow, Terraform, Kafka.
4. Web development: React, HTML/CSS, Next.js Django and Flask
5. BI: Tableau, PowerBI, QuickSight, GCP Data Studio

Available immediately.

Experience:

November 2021 – May 2023: Blackrock AI Labs – Senior Software Engineer (Vice president)

As Vice-President of the AI Labs at Blackrock, I worked as a senior software and machine learning engineer working on quant models and end-to-end deployment as well as the creation of ad-hoc software and libraries for trading squads.

- Built an end-to-end Python library for drift analysis (data, conceptual and model) using statistical and distribution tests. Ingested data using Airflow, created the AWS infrastructure with Terraform and CloudFormation, deployed on Docker and ECS Cluster and ran it daily. The whole project was deployed to all Blackrock trading squads.
- Developed several classifications models, libraries, and packages with Python (3.7.8 and 3.10), R and C++ (C17).
- Worked on AWS to Snowflake data migration as well as migration to Airflow 2.0.
- Technologies used include Airflow, AWS (S3, Athena, Redshift, Glue, Systems Manager, Lambda, Step Functions), Python, TypeScript, Node.js, React, Flask, Django, Grafana & Prometheus, Snowflake, Azure CosmoDB, Azure Synapse, ElasticSearch and FastApi.
- Built several products in image processing and NLP for trading using R-Shiny, Python, Scikit-learn, OpenCV, Scala, etc.
- Ensured best practices were followed in terms of design patterns, documentation, and code-review.

August 2019 – November 2021: Capgemini Invent UK, Senior Software Engineer (Managing Consultant) – Artificial Intelligence & Analytics

As a management consultant for Capgemini Invent UK, I worked as a data scientist, Machine Learning and Software Engineer, building software, web-applications and developing advanced machine learning models across retail, public sector, and financial services.

- **British luxury company:** Lead Machine Learning Engineer and market SME, built the multi-touch attribution model for a large British luxury retailer using Databricks, GitLab and PySpark. Created the CI/CD pipeline using Poetry, Typescript and GitLab, Azure Synapse, CosmoDB and Kubernetes.
- **Public sector:** Worked as a lead Node.js developer for the UK Department of Work and Pension. My main tasks were to follow Node.js best practices and refactor monolithic code into microservices.
- **Swedish furniture company:** led the analytics and software engineering team for a large Scandinavian retailer during their digital transformation project. Tasks involved designing the GCP database models and pipeline, building SQL query scripts and training the teams as well as designing various machine learning and deep learning models using packages such as Tensorflow, scikit-learn and PySpark. Built a classifier (CART) using Google Analytics Data to drive B2B sign-ups on the website and implemented it on GCP.
- **Large biopharmaceutical organisation:** built and implemented an anomaly detection (Isolation Forest) product to automate marketing and sales report and identify weak signals in demand decrease. Tools used included Java, SQL Server ML, SSAS, SSIS, Power BI, Typescript. I also built the front-end application using Python and Django.
- **Large UK transport and airport companies -** built studies and web application for the forecast of the economic impact of COVID-19 using SARIMA, Prophet, LSTM as well as VARMAX on Azure. Front-end was created using React and Next.js
- **Carbon emissions & sustainability project for a large European institution:** lead developer and architect, built a carbon emission optimiser in Flask using Django, Celery, Kubernetes, Docker, AI Platform as well as SQLite for an MVP. The tool was aimed at optimizing transport carbon emissions for the post-COVID recovery.
- **Large British airline company – financial analysis tool:** built and end-to-end MVP for a large British airline company. The tool used AWS Sagemaker, Django and AWS Comprehend and was built using Python.
- Led the development of Cloud Platform capabilities on AWS, Azure and GCP for Capgemini Invent, working closely with experts and account managers from the different providers.
- LSE students mentoring - mentored 10 students from the Master of Science in Data Science as part of the partnership between LSE and Capgemini Invent

May 2018-August 2019: Aviva Investors UK, Senior Data Scientist & Software Engineer

Worked as a data scientist for the asset management branch of Aviva. This role involved heavy data science, machine learning and deep learning.

- Delivered various analysis and models, using R, QlikView, Tableau, Teradata, Adobe Analytics, SAS, Dataiku and Python working on Next Best Product, time series, genetic algorithms, deep learning, classification, CLTV, Next Best Actions and Gradient Boost analysis on life insurance products. Achieved an overall improvement of +15% sales on equity release products by delivering a new segmentation model. Models were designed using Tensorflow, Keras, scikit-learn and PyTorch.
- Provided intellectual leadership for life insurance teams by generating ideas on how to solve business issues by leveraging data.
- Built Python libraries for drift analysis and reusable machine learning frameworks.

August 2014 – June 2019: Independent consultant – Software Engineer

I worked as an independent consultant for various companies while finishing my PhD in econometrics.

- **Video game company:** built a financial analysis tool and forecasting models using AWS, Snowflake, Power BI, Python and models such as CNN. The front-end was built using Django, React and deployed on AWS Elastic Beanstalk.
- **Large British advertising company - WPP (6 months):** built several web applications using Django and Flask using Dialogflow, GCP Translation's API and deployed using Kubernetes and Cloud Composer.
- **Public sector - Department for Education (12 months):** worked as a Django developer for the Department of Education, contributing to the codebase development including refactoring, APIs build.
- **Private equity firm - Apollo Advisors (4 months):** worked as backend software engineer on the development of a new trading automation platform, mostly building APIs in Python.
- **Large energy company - Ovo (4 months):** worked as a data engineer for the care data squad, building pipeline to unload data from Snowflake. Stack used includes GCP cloud functions, cloud storage, networking, Snowflake, BigQuery and Cloud watch.
- **Large Swedish car company (6 months):** lead software engineer and data engineer on AWS (S3, Lambda, Glue, Athena, EMR, Redshift, Cloud Formation), D3.js, Flask Django and Tableau. Built the pipeline for the Marketing Analytics team for a BI project related to the launch of new cars. Directly reported to the CMO.
- **Charity - Relief International (2 months):** built a JavaScript client tool for data ingestion and analysis for a large humanitarian charity.

January 2017 – May 2018: Lagardère Active, Hachette UK, Group Data Science Manager

I was hired as a data science manager for Lagardere to build the forecasting, analytics and data science capabilities of the company. My tasks involved designing infrastructure, BI projects, training the teams on analytics, building econometrics models as well as deploying software within the organization.

- Provided intellectual support and technological knowledge on key data strategy projects for the Head of Innovation & Data and the CEO such as a mobile reading application for book testing and data collection. Led the implementation of Adobe Campaign, Adobe Analytics, Google Analytics, IBM Cognos, SQL Server and AWS across the divisions.
- Gathered business requirements and created applications for data scraping and sentiment analysis using Java, Python and MongoDB, built models for classification and regression purposes (decision trees, NLP, CART, neural networks, etc.). Built a scraper in Java to gather data from Facebook, Twitter and newspapers to apply sentiment analysis and NLP.
- Led the analytics team in the definition of the data science strategy and models to use and developed the capability through training.

November 2014 - January 2017: MVF Global, Software Engineer and Data Scientist

As my first job in the United Kingdom, I worked for a start-up, building machine learning models for customer segmentation and CRM. I also built several Python libraries and worked on the CRM and BI architecture.

- Built analytics products for customers' segmentation (CLTV, machine learning, time series, RFM, K-Means, PCA), text-mining, NLP (LDA, topic analysis, vec2vec) and churn identification using Python, Java, SAS, SQL and VBA based on clients' specifications.
- Designed the CRM's architecture for a more data-driven environment using MS Access, Salesforce, VBA, Java, and Oracle as well as the reporting system.
- Created several libraries in Java for NLP and customer segmentation.

June 2011 – September 2014: Orange Business Services, Junior Software Engineer Consultant (Java)

- Built resources information systems, change and knowledge management projects aimed at improving performance for various clients.
- Built a scraper in Java for a large French luxury retailers as well as a graph analytics software to identify centrality across online communities
- Helped clients and internal teams understand technology capabilities and the impact they can have on their business.

Education:

2014-2018: University of Geneva, PhD in Econometrics

2011-2013: Paris Dauphine (PSL) University - Master of Science in Telecommunications Engineering

2011-2012: Paris 1 Pantheon-Sorbonne, Master in Political Science & Government

2008-2011: Bordeaux University, College of Engineering and Technology – Bachelor of Computer Science and Economics

Technological skills:

Programming: Python/R , Ruby, Javascript/React, C++/Java

Web application frameworks: Django, flask, dash, Ruby on Rails

Database: SQL, SQL Server 2013, Google Big Query, AWS Athena/Redshift, Oracle, MS Access, Neo4J

Analytics: R, SAS, VBA

CRM: Salesforce Marketing Cloud, Adobe Campaign

BI tools: Tableau, IBM Cognos, Power BI, QlikView

Cloud: Amazon S3, Microsoft Azure, GCP

Languages: French (Native speaker), English (Fluent), Italian (Basics), Japanese (Basics)

Certifications:

Cloud computing:

-AWS Solution Architect Associate & AWS Cloud Practitioner

-GCP Data Engineering professional

-Azure AI Engineer, Azure Data Engineer

Data science and machine learning:

-Azure Data Science Associate

-Tensorflow developer certificate

Others:

-Adobe: Adobe Campaign Business Practitioner, Adobe Campaign workflow and data management.

-Neo4J Developer, Neo4J Graphs for data science

-PowerBI accreditation

-LPI-1: Linux Administrator

-Comptia: Network+ & Pentest