Staff Software Engineer | Optimization Engineer

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Summary

Staff Software Engineer with 11 years experience in software design, development and implementation mainly on high performant mathematical optimization softwares and real time data ingestion & processing pipelines for IIoT data.
Wore many hats including Software Engineer, Project Manager, Optimization Expert and L3 Technical Support.

Work Experience

Staff Software Engineer – since 2020 (2 years) – InUse Boulogne-Billancourt, France

- Responsible of the **real time data ingestion** into the data lake and the data processing **pipeline**
- **Technical manager** of Pure Cleaning application. Integration of a dozen of new clients with heterogeneous data.
- **Full stack development** to improve the self serviceness of the platform (increased self service data integration by 20%) and add new core features around data

keywords: Python, Django, Pandas, Postgresql (timescaledb), Elasticsearch, RabbitMQ, mqtt, Airflow, Celery, Reactjs, Docker, Ansible, Grafana, Graylog, Nod-RED, IIoT

Software & Optimization Engineer – 2012 - 2020 (7 years) – Artelys – Paris, France

- **Technical manager** and **Lead Developer** of Artelys Crystal Resource Optimizer, a decision support software for activity planning (workload planning, workforce planning, scheduling and vehicle routing)
- 'Data Model and Persistence' **team leader**. Conception and implementation of a Low code **ORM** framework used in Artelys Crystal softwares using common data structures, persistence layer and GUI for data administration. Reduce the need of software development skills by 30%.
- Different R&D projects in energy optimization (market clearing, smart grids, network design, unit commitment)
- Writing technical proposals for tenders and R&D projects
- Optimization consultant/expert (SFR, Epex Spot, SNCF, Air Liquide), Reporting Analyst (Engie)

keywords: Optimization (scheduling, capacity planning, etc.), Java, Python, Jenkins, ORM, Sql, Energy, GIS

Optimization Engineer Intern – 2012 (5 months) – Orange labs – Optimization, Issy-Les-Moulineaux, France

Conceived and implemented an exact optimization method for Time-Dependent Vehicle Routing Problem with Time Window (TD-VRPTW) for intervention scheduling and field force management.

Keywords: Branch & Price, TD-VRPTW, Cplex, Java

Software Developer Intern – 2011 (5 months) – Amadeus – Operations Research & Innovation, Sophia-Antipolis, France

Designed and developed a decision support framework for an airline flight scheduling optimization by analysing its market position and its schedule quality

Keywords: Data analysis, Data processing, Data visualization, Java (Swing, Prefuse), Python, Tableau

Education

Master degree in Optimization – *2011-2012* – **Paris Dauphine & Mines ParisTech**, Paris, France

Master "Modelling, optimization, decision & organization" in operations research and decision support

Engineer degree – *2008-2011* – **ENSEEIHT**, *Toulouse, France*

Computer Science & Applied Mathematics

Skills

Computer Science -**Software Development**, **Data ingestion/Pipeline**, ETLs, Data visualization, Software architecture, Technical Support, GIS, DevOps, Monitoring

Languages - **Python** (Django, Pandas, Airflow, Celery), **Java** (Swing, Java EE, JPA) , Front-end (ReactJS, JS, HTML)

Databases - **PostgreSQL** (TimescaleDB, PostGIS), Oracle (PL/SQL), MS SQL Server - **Elasticsearch**

Applied Mathematics - **Optimization** (Operations Research, Non-linear Optimization), Machine Learning

Optimization - AMPL, YALMIP, FICO-Xpress, Cplex, Knitro, Matlab, COIN-OR, GLPK

Languages - French (Bilingual), English (Fluent), Arabic (Native), Spanish (Beginner)