

Antoine Desbordes

Software engineer

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May 31st 1985

Skills & Abilities

Programming	Rust, Advanced C++, Go, Python, Elixir
Optimization	Graph theory (mostly shortest path), mathematical programming, constraint programming, local search, decision tree, rules engine
Tools	Linux, Docker, Kubernetes, Helm, ElasticSearch, Postgres, GIS, Boost

Work Experience

- Dec 2018 – **Software Engineer**, CODEURS EN LIBERTÉ, Paris
Present Freelance developer at [Codeurs en Liberté](#).
- **Le Bon Coin**: Rework of the [Le Bon Coin](#)'s accounts system;
 - **Hove**: Design and development of a new transport data platform on the cloud;
 - **Ministre de la Transition écologique**: Development of the French open data platform [transport.data.gouv.fr](#) for [beta.gouv.fr](#). Development of open source tools around public transit like [a realtime data converter](#).
- Oct 2017 – **Software Engineer**, QWANT RESEARCH, Paris
Nov 2018 Creation of Qwant Maps, an [open source](#) map service for [Qwant](#), a French search engine focused on respecting privacy.
Design of a scalable vector tile architecture and development of a worldwide geographic search engine.
Core developer on:
- [mimirsbrunn](#): worldwide geographic search engine (geocoder)
 - [cosmogony](#): tool to process geographic regions
- Nov 2013 – **Software Engineer**, HOVE, Paris
Sep 2017 Software engineer in the operations research team in charge of [Navitia](#).
Navitia is a [opensource](#) traveler information software providing features like multi-modal journeys, timetables, and isochrones. It is an API build with micro-service components written in C++, python and rust and can handle real-time data.
Navitia's core feature, the journey planning, uses various algorithms as Djisktra's and a custom version of [RAPTOR](#), a multi objective dynamic programming algorithm mixed with branch and bound.
- Oct 2007 – **Optimization Engineer**, EURODECISION, Paris
Nov 2013 EURODECISION is a consulting firm specialized in Optimization.
Example of missions carried out:
- **Air France** Long term mission on: crew scheduling, yield management system, forecasting and flight program optimization;
 - **ERDF**: Shortest path and vehicle routing implementation for the deployment of the Linky electric meter;
 - **Tegaz**: Leading the development of an optimization engine to balance a gas network;
 - **AAA Data**: Rule based engine to aggregate heterogeneous data sources.

Languages

French Native speaker

English Fluent

Daily used at work. 7.5/9 "good user" at the IELTS exam.

Education

- 2003 – 2007 **École des Mines de Nantes**, Computer science and operations research
2002 – 2003 **Classe Préparatoire aux Grandes Ecoles**, Lycée Claude Bernard, Paris