SIDNEY **CONGARD**

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WORK EXPERIENCE

Fixed-term contract: November 2022 — March 2023
R&D engineer • Prosecco - INRIA • France, Paris

Implemented Coq support for Aeneas, aiming for an idiomatic representation. Includes custom tactics for partial automation.

Internship: May 2022 — September 2022
R&D intern • Prosecco - INRIA • France, Paris

Worked on Aeneas, a framework translating safe Rust programs into a proof assistant:
- Implementing support for global variables
- Refactoring the Rust compilator plugin
- Elaborating a join operation, a first step towards translating loops

Permanent contract: April 2019 — August 2021
C++ R&D engineer • QuasarDB • France, Paris

- Added features into the database query langage, proposed & worked on a redesign of the query engine, based on a new DSL adapted to carry operations on the distributed database.
- Improved performances on critical paths, such as the serialization protocol.
- Proposed & implement some changes about the internal architecture, such as the handling of objects created by the client API.
- Created a tool used to clone a cluster, allowing it to progress & keep a coherent state despite being interrupted then restarted.

Internship: October 2018 — March 2019
C++ programmer • QuasarDB • France, Paris

Improved a high-speed CSV ingestion tool for the company database :
- Changed the tool global architecture
- Added benchmarks
- Improved the performances about parsing the CSV
- Added capabilities to autofill or interactively ask about the missing parts of the CSV format

Internship: June 2017 — July 2017
C# Internship • Zenidoc • France, Marseille

Developed multiple C# applications, including a COM server and graphical interfaces.

EDUCATION

2021 — 2022
Mathematical logic & computer science master (LMFI) • Université Paris-Cité • Paris, France
Formal verification, type theory, calculability, set theory, model theory, category theory. Ranked 11th/29.

2017 — 2018
Computer science master • UQAC • Université du Québec à Chicoutimi, Canada
Distributed databases, data mining, game engines conception.

2015 — 2017
Computer science engineer • Polytech' Marseille • Université d'Aix-Marseille, France
Algorithms, distributed programming, network, graphics programming, optimisation.

2013 — 2015
Preparatory School to Grandes Ecoles • Lycée Schweitzer • Mulhouse, France
Majoring in maths & physics, with computer science in option.