

# Julius de Bruijn

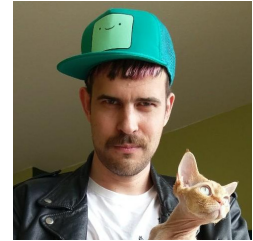
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GitHub: [github.com/pimeys](https://github.com/pimeys)

Languages: Finnish (mother), English (proficient)



## EDUCATION

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### Aalto University

Espoo, FI

Master of Science

2006–2011

- Major: “Software Engineering and Business”
- Minor: “Multimedia Technology”
- Dropped out from the university when moved to Berlin in 2011

## EXPERIENCE

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### Prisma ([prisma.io](https://prisma.io))

Berlin, DE

Software Engineer (Rust)

Feb 2019–

- Bootstrapped Prisma from Scala to Rust, bringing the Scala devs up to speed with the new language.
- Wrote big parts of the Rust engines [13].
- Design, implementation [20] and documentation [19] of a low level, asynchronous and runtime-independent Microsoft SQL Server library for Rust.
- Discovery [6] and design [5] of the multi-schema product.
- Design, implementation [15] and documentation [14] of an SQL query builder and connector library for Rust.
- Design [4] and implementation [7] of PostgreSQL special index types.
- Implementation [8] of MongoDB schema introspection.
- Implementation [12] of PostgreSQL extensions in the Prisma Schema Language, introspection and migrations.
- Re-design and organization of SQL introspection codebase [17].

### 360dialog ([www.360dialog.com](https://www.360dialog.com))

Berlin, DE

Senior Software Engineer (Rust, Clojure, Scala, Lua, C++)

Apr 2016–Sep 2018

- Design and implementation of push notification service [1] sending large amount of notifications to Apple’s [2], Google’s [3] and Web Push [21] platforms in Rust.
- Design and implementation of a RESTful API for campaign management, where customers could upload and transpile campaigns [18].
- Maintaining and extending an in-house rule engine and virtual machine to execute campaign programs for millions of users. The system allows a custom program to be executed for every user and is written with C++ and Lua.
- Maintaining and extending a code generator to create campaigns for the rule engine to run using Clojure. Handled a complete refactoring of the library and extended it to handle more use cases.

### Fyber ([www.fyber.com](https://www.fyber.com))

Berlin, DE

Senior Software Engineer (Ruby, Scala)

Sep 2011–Mar 2016

- Rewrote several parts of an advertisement service with Scala, including a high traffic tracker service and publisher callback system.
- Designed and Implemented a statistics service and library with ZeroMQ, Ruby and Exasol.
- Part of a core team to build a new backend infrastructure, implementing the ZeroMQ and Ruby based service from scratch.

## PROJECTS

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- Software reproducibility, using Nix and NixOS [16] on my main desktop, laptop and server operating system [9]. Maintainer of a few Nix packages [10].
- Building an open source home automation system as my pandemic project, and still on that path.
- Hacking with my diabetes, operating an open source artificial pancreas [11].

## REFERENCES

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- [1] *A consumer to send push notifications from Kafka*, <https://github.com/xray-tech/xorc-notifications>.
- [2] *A native, asynchronous Apple push notification client*, <https://crates.io/crates/a2>.
- [3] *An API to talk to FCM (Firebase Cloud Messaging) in Rust*, <https://crates.io/crates/fcm>.
- [4] de Bruijn, *Extended Indices in PostgreSQL, design proposal*, <https://github.com/pimeys/writing/blob/main/prisma/Proposal:%20Extended%20Indices%20PostgreSQL%20GA.org>.
- [5] de Bruijn, *Querying Across Multiple Schemas with Prisma, design proposal*, <https://github.com/pimeys/writing/blob/main/prisma/Proposition:%20Querying%20Across%20Multiple%20Schemas.org>.
- [6] de Bruijn, *Querying Across Multiple Schemas with Prisma, product discovery*, <https://github.com/pimeys/writing/blob/main/prisma/Discovery:%20Querying%20Across%20Multiple%20Schemas.org>.
- [7] *Extended Indices in PostgreSQL, implementation*, <https://github.com/prisma/prisma-engines/pull/2858>.
- [8] *Introspection of MongoDB database schema, implementation*, <https://github.com/prisma/prisma-engines/pull/2261>.
- [9] *My NixOS configuration*, <https://github.com/pimeys/nixos/>.
- [10] *Nix Packages collection*, <https://github.com/nixos/nixpkgs>.
- [11] *Open source automated insulin delivery system (closed loop)*, <https://github.com/nightscout/androidaps>.
- [12] *PostgreSQL extensions, implementation*, <https://github.com/prisma/prisma/issues/12308>.
- [13] *Prisma Rust engines source code*, <https://github.com/prisma/prisma-engines>.
- [14] *Quaint documentation*, <https://prisma.github.io/quaint/quaint/index.html>.
- [15] *Quaint source code*, <https://github.com/prisma/quaint>.
- [16] *Reproducible builds and deployments*. <https://nixos.org/>.
- [17] *SQL introspection connector codebase*, <https://github.com/prisma/prisma-engines/tree/1930990e330e6d756a3a360fdde6566a653b8ba8/introspection-engine/connectors/sql-introspection-connector>.
- [18] *The main entry to the OAM*, <https://github.com/xray-tech/xorc-gateway>.
- [19] *Tiberius documentation*, <https://docs.rs/tiberius/latest/tiberius/>.
- [20] *Tiberius source code*, <https://github.com/prisma/tiberius>.
- [21] *Web push notification client with support for http-ece encryption and VAPID authentication*. <https://crates.io/crates/web-push>.