

# Philip Patsch

## Curriculum vitae

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## ABOUT ME

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My name is Philip Patsch, I go by the nick Profpatsch. I am a **hacker**, Unix geek and functional programmer. I also do systems integration with Nix(OS).

I am firmly rooted in the hacker/maker scene of Augsburg (Bavaria), where I helped build the local hackerspace over the course of three years.

## EDUCATION

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2012–2016 **Bachelor of Science**  
INFORMATICS & MULTIMEDIA  
*University of Augsburg*

2003–2012 **Secondary Education**  
BAVARIAN PREPARATORY SCHOOL  
*Wernher-von-Braun Gymnasium,  
later Deutschherren Gymnasium*

## COMMUNICATION SKILLS

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GERMAN Native speaker

ENGLISH Oral: fair  
Written: good

## MISC

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BORN July 1993

CITY Augsburg

## LANGUAGE BACKGROUND

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My first language was Java, of which I learned the absolute basics in school and then taught myself the rest in my free time. It was the most widespread language at my university and used for assignments. We were also taught basics of C and pointer arithmetic. I then dove into GNU/Linux (in the context of our newly founded hackerspace), shell scripting and Python (which I directly used in a two month company internship).

Inheritance-based imperative languages felt very complex, and I found myself frequently using Python's functional features. Those quickly became limiting, so I started learning Clojure in late 2013. It taught me about basic functional concepts and the value of immutability. I also experimented with Scheme and basic Emacs Lisp.

After a while the untypedness of these languages and the constant runtime errors began to worry me. I had looked at Haskell before, but it didn't "click" at the time. With my new functional knowledge I decided to try again, and succeeded. I worked through Learn You A Haskell and started writing my first little programs (late 2014). I have used Haskell as my main language ever since and grokked a large number of concepts (except advanced type level magic).

In 2015 I took interest in Nix and NixOS. I had been on Arch since 2013, but Haskell development didn't play nice with its package manager, so I switched. With the help of a NixOS core developer, I gained a wide knowledge of the package manager, the distribution, and its internals. I became a **regular contributor** & project member in 2016. Packaging for Nix(OS) taught me advanced skills in the GNU/Linux ecosystem (like ELF-binaries, stracing, sed syntax, ...) and a deeper knowledge of lazy functional techniques. I think nix can solve many problems that are prominent in deployment and development environments today.

I am also fairly versed in Scala, some Javascript, and a few other languages.

## SELECTED PROJECTS

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LATE 2015–MID 2016

EARLY 2013–ONGOING

Founding Member

### *OpenLab Augsburg*

Co-Founded & helped grow **Openlab Augsburg**. With 100+ members on 140m<sup>2</sup> open space for technical, artistic and cultural projects & events it has become a central point of hacker culture in our city.

EARLY 2013–LATE 2015

Project Lead

### *Equestria Publications*

Design, publishing and print on a **book on candy-colored horses**.

It was an odyssey, but I'm very proud of what our small team of 4 core members, author and ~25 proof-readers were able to achieve.

MID 2014

Python

### *Time Tracking Application*

Replacement for a company time tracking application, written in Python, as HTTP server/client architecture.

EARLY 2015–ONGOING

Organisator

### *Curry Club Augsburg*

Co-Founded **Curry Club Augsburg**, a 4-weekly meeting of FP & formal method enthusiasts. Each meeting consists of 2–3 talks of an hour or more (in German, **available on Youtube**), spanning diverse topics like functional methods, formal verification, category theory, interesting mathematical concepts, or Edward Kmett libraries.

Some leading experts in their fields (e.g. the Isabelle theorem prover) visit regularly, as well as guest speakers.

We host irregular multi-day workshops, e.g. on Introduction to Haskell or NixOS hackathons.

2015

Research

### *Bachelor's Thesis*

Thesis in the field of Organic Computing, "Integrating Digital Trust Management into a Computing Grid System". The system was written in Scala, and I integrated some prior work on pheromone-based trust into it, combined with theoretical elaboration on the topic.

Scala/Javascript

### *Master's Project*

Rewrite of the same computing grid system, I constructed a frontend for it with Scala and plain Javascript.

2016

Haskell/GHCJS

### *Customer Project*

Rewrite of an internal tool for contract management for a small mobile consultant company. Written in Haskell with Spock & GHCJS, with connection to an existing Microsoft Database and a custom browser frontend for data management.

## PASTIMES

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As an amateur musician, I listen to a wide variety of artists and try to expand my musical horizon constantly. I started learning to play the piano in my early teens, and have been playing in worship service at my local church for nearly a decade now, more recently also as a leader.

I am trying to get into learning human languages again and have taken a particular interest in Japanese language and culture. As an easier first goal I took on studying the constructed language **Lojban**, together with a group of like-minded people from my local area.