

# BENJAMIN HODGSON

<https://www.benjamin.pizza>

## EXPERIENCE

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### Stack Overflow

Staff Software Developer

2021–

Senior Software Developer

2018–2021

Software Developer

2016–2018

*Stack Overflow is the world's largest repository of programming knowledge and community of software developers. I work on Stack Overflow's Talent product, a developer hiring platform.*

- I've served as the lead developer on a number of large and challenging projects, involving complex implementation work, intra- and inter-team project management, and collaboration with designers, product managers, and data scientists. These include:
  - A major redesign of Stack Overflow's Jobs product, resulting in a 35% increase in job views and a 9% increase in job applications.
  - New reporting tools to give employers insight into the performance of their hiring efforts.
  - Recommended Candidates, a feature I devised and pitched, which intelligently matches candidates to job listings.
- I'm a consistent advocate for performance, scalability, maintenance, and resolving technical debt.
  - I designed, implemented, and delivered major architectural improvements to Stack Overflow's job search algorithm. This area includes a parser, analysers, and a code generator for our advanced search syntax, as well as a hand-tuned in-memory search index. My work resulted in a 100-fold performance improvement to the core algorithm, allowing the product to scale to millions of jobs and enabling syndication partnerships with other job boards.
  - I designed, pitched, implemented and documented a number of large-scale simplifications to Talent's 10-year-old data model.
  - I led the team in transitioning the entire front-end codebase to TypeScript.
- As the Talent team's Tech Lead, I work especially closely with product managers and designers to manage the team's work stream and identify potential issues in advance. I am also the point of contact for other teams and departments when coordinating cross-team projects.
- I'm a dedicated mentor and teacher of junior teammates. I mentored a developer apprentice in her first engineering job, providing guidance — both technical and pastoral — along the path to becoming a productive and skilled developer.
- Working with management and HR, I helped to develop and document interview questions and conduct interviews for a variety of roles across the Product & Engineering department.

### Huddle

Software Developer

2014–2015

Graduate Software Developer

2013–2014

*Huddle is a secure collaboration and filesharing system for enterprise and government.*

- With two teammates, I delivered a strategic technical project, extracting Huddle's key file-sharing component from the surrounding legacy application into a micro-service. This allowed us to deliver over the next two months a 10-fold performance gain for the product's main pages.

- During 20% time, I designed and implemented several innovative features for Huddle, including a project entitled Annotations which won the prize for best Hackathon pitch.
- I contributed a net negative number of lines to Huddle's codebase.

## University of Oxford Physics Department

Research Assistant

*Summer 2012*

- I developed an application for controlling scientific instruments and analysing data.
- I worked with users (scientists) to understand requirements and design an intuitive interface.

## National Physical Laboratory

Research Assistant

*2009–2012*

- I worked in the ultrasonics department, performing research into cavitation, food processing, instrument validation, and novel measurement techniques.

## EXTRA-CURRICULAR

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I'm the author of several high-quality open source libraries, available on my GitHub profile (<https://github.com/benjamin-hodgson>):

- [Pidgin](#), a functional parsing library with a focus on performance.
- [Sawmill](#), a library of abstract tools for working with trees.
- [Eighty](#), an HTML generation library.

I've also contributed to third-party open source projects, including performance and documentation fixes in the .NET Framework.

My personal website, <https://www.benjamin.pizza>, features posts about technical matters. Highlights include:

- [Write You A Prolog](#), a programming language implementation tutorial.
- [Recursion Without Recursion](#), detailing Sawmill's API and design.
- [Rewriting IRewritable](#), detailing Sawmill's internal implementation.

I'm a high-reputation Stack Overflow user with over 400 posts, mainly in the Haskell tag.

I love to learn programming languages, especially those which make you think differently about software. I've written personal projects using Haskell, Rust, Scala, Prolog, Agda, Coq, and Idris.

## EDUCATION

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**St. Catherine's College, University of Oxford**

*2009–2013*

- MPhys Physics. Upper Second class honours.
- I received the Neville Robinson Prize for performance in final examinations.

**Tiffin Boys' School, Kingston Upon Thames**

*2002–2009*

- A levels: Physics A, Maths A, Music A.

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References available upon request.