

BENJAMIN HODGSON

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EXPERIENCE

Senior Software Developer, Stack Overflow

2016–

- 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.
- Technologies include C#, TypeScript, SQL Server, ASP.NET, .NET Core, Redis, Entity Framework, Dapper.
- 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.
- Consistent advocate for performance, scalability, code maintenance and resolving technical debt.
 - Designed, implemented, and delivered major architectural improvements to Stack Overflow's job search algorithm. This resulted in a 100-fold performance improvement to the core algorithm, allowing the product to scale to millions of jobs.
 - Designed, pitched, implemented and documented a number of major simplifications to Talent's 10-year-old data model.
 - 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 backlog and identify potential issues in advance. I am also the point of contact for other teams and departments when coordinating cross-team projects.
- Dedicated mentor and teacher of junior teammates. Welcomed a developer apprentice into her first engineering job, providing assistance and guidance along the path to becoming a productive and skilled developer.
- Devised, organised, and participated in *Stack Codes*, a learn-to-code programme pairing developer mentors with staff across the company.
- Working with management and HR, helped to develop and run interviews for a variety of roles across the product & engineering department.

Software Developer, Huddle

2013-2016

- Huddle is a secure collaboration and filesharing system for enterprise and government.
- Worked in a skeleton team on a strategic and technical back-end project, extracting Huddle's key file-sharing component from the surrounding legacy application into an autonomous microservice.
- Delivered a 10-fold performance gain over two months for the product's critical flows.

- Analysed business cases for new product features and designed technical architectures from scratch.
- During 20% time, designed and implemented several innovative features for Huddle, including an *Annotations* project which won the prize for best Hackathon pitch.
- Wrote posts for Huddle's engineering blog and gave technical talks to the development department.
- Contributed a net negative number of lines to Huddle's codebase.

Research Assistant, University of Oxford Physics Department

Summer 2012

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

Research Assistant, National Physical Laboratory, Teddington

2009–2012

- In the ultrasonics department, researched cavitation, food processing, instrument validation, and novel measurement techniques.
- Developed image analysis software which remained in use until the project's completion.

EXTRA-CURRICULAR

Author of 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**, abstract tools for working with trees.
- **Eighty**, an HTML generator.

Contributor to open source projects, including performance and documentation fixes in the .NET Framework.

Technical posts on my personal website, <https://www.benjamin.pizza>. 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.

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

St. Catherine's College, University of Oxford

2009–2013

- MPhys Physics. Upper Second class honours
- 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.

References available upon request.