

# Michael Peyton Jones

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- Experienced research engineer, with a track record of developing and implementing novel business-relevant research.
- Lead software developer, capable of managing the evolution of complex, business-critical projects.
- Reliable team lead, with experience facilitating a team of peers, and balancing the requirements of long-term research and short-term business needs.

## Experience

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### Semmler

Oxford

*Research Engineer/Lead Software Developer*

*April 2013-Present*

I did a wide variety of work at Semmler, including:

- Programming language design for the logic language QL.
  - Designed and implemented a higher-order module system, enabling generic programming in QL for the first time.
  - Designed and implemented a recursive aggregate semantics, allowing efficient computation of additional graph algorithms in QL.
- Compiler and optimizer engineering.
  - Implemented multi-stage caching of compilation and optimization results, improving compilation speed by orders of magnitude in common cases.
- Leadership and management of the QL team.
  - Implemented simple time forecasting for team objectives.
  - Managed the implementation of parallel query evaluation, which was a six month project but delivered on time.
- Research and intellectual property development.
  - Published original research on incremental computation, and implemented the material in our evaluator.
- Internal code health initiatives.
  - Replaced several home-grown logging frameworks with single open-source solution across the whole codebase.
  - Managed the process of making most of our QL code open-source.
- Offensive security research and variant analysis with QL.
- Customer success and sales engineering.

### Good Technology Project

Oxford

*Co-founder*

*June 2016-December 2017*

This was a research project and consultancy focussed on social impact in technology and entrepreneurship. Some examples of work that I did:

- o Advised companies, institutions, and individual entrepreneurs on impact strategy.
- o Developed qualitative and quantitative modelling techniques for assessing the potential impact of startups.
- o Interviewed experts and conducted synoptic desk research to break down problem areas.

## Publications

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Alvarez Picallo, Mario, Alex Eyers-Taylor, and Michael Peyton Jones (2018). *Fixing Incremental Computation: Derivatives for dcpos, fixpoints, and the semantics of Datalog*.

Avgustinov, Pavel et al. (2016). "QL: Object-oriented Queries on Relational Data". In: *LIPICs-Leibniz International Proceedings in Informatics*. Vol. 56. Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik.

## Education

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**Oxford University**

*Mathematics and Philosophy*

MMathPhil - First Class

**Oxford**

2008-2012

*Jodrell Scholarship*

For performance in Final Examinations

2011

## Skills

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Programming languages.....

**Fluent:** Java, Scala

**Proficient:** Python, Haskell

**Conversant:** Javascript, Typescript, Rust, C#, C/C++, Idris

## Interests

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I sing with Commotio in Oxford, as well as occasionally returning to the Queen's College Chapel Choir. I like reading and playing squash, when I get the opportunity. I am a member of Giving What We Can.