

# Michael Peyton Jones

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- Lead software developer, capable of identifying and tackling complex, cross-team, business-critical projects.
- Reliable team leader, with experience facilitating a team of peers, balancing requirements, and bridging communication gaps.
- Experienced research engineer, eager to master new domains and turn research ideas into reality.

## Experience

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### Input Output HK

London

*Technical Architect*

*September 2021-Present*

Technical Architect (although my actual work was closer to “staff engineer”) for the Plutus team, working on smart contract support for the Cardano blockchain.

- Expanded scope to address broad company and ecosystem problems:
  - Helped redesign the CIP process for open design work on Cardano; wrote and implemented multiple popular CIPs.
  - Initiated and led an initiative to simplify internal dependency management.
  - Worked on the design of a new software foundation, and wrote its Open Source Governance Policy.
- Continued work within the Plutus team:
  - Acted as Product Owner, defining the team’s goals and work.
  - Ongoing direct technical work, including major changes to the Plutus Core language for performance.

### Input Output HK

London

*Software Engineering Lead*

*October 2019-September 2021*

Team lead for the Plutus team, working on smart contract support for the Cardano blockchain.

- Shepherded the design of Plutus — a complex, multi-year project — from shortly after conception to integration into the Cardano mainnet.
- Managed team and product priorities, requirements, and roadmap.
- Grew the team, including splitting of a sister team to work on application support.
- Continued direct technical work, including major performance improvements to Plutus Core.

### Input Output HK

London

*Compiler Engineer*

*July 2018-October 2019*

Compiler Engineer on the Plutus team, working on smart contract support for the Cardano blockchain.

- Implemented a Haskell to Plutus Core compiler as a GHC compiler plugin.
- Designed and implemented an intermediary language for Plutus Core.

### **Semmler**

**Oxford**

*Research Engineer/Lead Software Developer*

*April 2013-July 2018*

Research Engineer and Lead for the QL team, working on the QL logic programming language, compiler, and toolchain.

### **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.

## **Education**

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### **Oxford University**

**Oxford**

*Mathematics and Philosophy*

*2008-2012*

MMathPhil - First Class

*Jodrell Scholarship*

*2011*

For performance in Final Examinations

## **Skills**

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### **Programming languages**.....

**Fluent:** Haskell, Java, Nix

**Proficient:** Python, Scala, Agda

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

## **Interests**

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I'm a choral singer, and I like reading, swing dancing, and playing squash, when I get the opportunity. I am a member of Giving What We Can, and I've pledged to give 10% of my lifetime earnings to effective charities. I am one of the maintainers of the Haskell Language Server project.

## Publications

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- Chakravarty, Manuel M. T. et al. (2022). “Babel Fees via Limited Liabilities”. In: *Applied Cryptography and Network Security*. Ed. by Giuseppe Ateniese and Daniele Venturi. Cham: Springer International Publishing, pp. 707–726. ISBN: 978-3-031-09234-3.
- Chakravarty, Manuel MT, James Chapman, Kenneth MacKenzie, Orestis Melkonian, Michael Peyton Jones, et al. (2020). “The extended UTXO model”. In: *International Conference on Financial Cryptography and Data Security*. Springer, pp. 525–539.
- Chakravarty, Manuel MT, James Chapman, Kenneth MacKenzie, Orestis Melkonian, Jann Müller, Michael Peyton Jones, Polina Vinogradova, and Philip Wadler (2020). “Native custom tokens in the extended UTXO model”. In: *International Symposium on Leveraging Applications of Formal Methods*. Springer, pp. 89–111.
- Chakravarty, Manuel MT, James Chapman, Kenneth MacKenzie, Orestis Melkonian, Jann Müller, Michael Peyton Jones, Polina Vinogradova, Philip Wadler, and Joachim Zahnentferner (2020). “UTXOma: UTXO with Multi-asset Support”. In: *International Symposium on Leveraging Applications of Formal Methods*. Springer, pp. 112–130.
- Alvarez-Picallo, Mario et al. (2019). “Fixing incremental computation: Derivatives of fixpoints, and the recursive semantics of datalog”. In: *International Conference on Foundations of Software Science and Computation*. Springer, pp. 30–45.
- Jones, Michael Peyton et al. (2019). “Unraveling recursion: compiling an IR with recursion to System F”. In: *International Conference on Mathematics of Program Construction*. Springer, pp. 414–443.
- 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.