







# DANIEL TATTAN-BIRCH

Senior Software Engineer with a preference for pure functional programming. I built and now maintain the [ITV News](#) backend systems using a Scala [Typelevel](#) stack. I have previous experience building statistical models in Scala and financial trading applications in C#.

Broadly, my technical interests include domain modelling, software design patterns, functional programming and their application to real world problems. Working on my [MSc dissertation](#) also sparked an interest in effect systems and programming language research.

My GitHub username is [dantb](#) and an extended version of this CV can be found online at [dantb.dev/cv](#).

## PERSONAL DETAILS




-  **Name**  
Daniel Tattan-Birch
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-  **Nationality**  
United Kingdom, Ireland (EU Citizen)
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## SKILLS

- Functional Programming
- Scala
- Typelevel
- Functional software design
- OOP software design
- Testing techniques
- Data Modelling
- Content Management Systems
- Databases
- Web API Development
- Distributed Systems
- Cloud-based Automation
- Third party integrations





## WORK EXPERIENCE

-  Dec 2018 - Present **Senior Scala Engineer**  
ITV, London  
Developed distributed systems supporting various ITV products such as ITV News, ITXV and sites for various programmes. All our backend applications are built using a Scala Typelevel stack.
-  Dec 2017 - Dec 2018 **Software Engineer**  
Football Radar, London  
Football Radar perform statistical analysis on data collected from football matches and generate real-time predictions based on the models. I was part of the modelling team, working closely with data scientists to understand and implement algorithms to improve our predictive models.
-  Sep 2015 - Dec 2017 **Full-Stack Developer**  
Fidessa, London  
Developed enterprise investment management systems for financial institutions. Specifically we built native .NET frontend applications and C++ microservices.



## EDUCATION

-  Oct 2017 - 2022 **M.Sc. in Software Engineering, Distinction**  
University of Oxford  
A flexible part-time course designed for software professionals. Initially joined with the goal of filling my most obvious knowledge gaps. This was broadly successful and the course played a big part in guiding my technical interests.  
**Dissertation:** Comprehending Pure Functional Effect Systems  
**Dissertation keywords:** Haskell, Scala, Functional Programming, Effects, Design Patterns, Monads, Extensible Effects.  
**Course keywords:** cloud computing, big data, database design, deep learning and embedded systems.  
**Mark:** 80.
-  2012 - 2015 **B.Sc. in Mathematics, First-class Honours**  
University of Warwick