

MATTHEW MACLEOD

TECH LEAD & ENGINEER

Background

I am a cross-discipline technical lead and engineer with 15+ years of experience working in industries including robotics, publishing, academic research, and visual design. I have a comprehensive skillset which is applicable to a wide variety of applications, including user interfaces, embedded systems, high-throughput data processing pipelines, and native applications on both mobile and desktop platforms.

I have worked in small and large teams as an individual contributor and a technical lead, including management of other developers and designers. I enjoy working at all levels of the technology stack, but I can offer the most value in projects that require large-scale design and architecture of technically challenging systems solving unique problems. I'm comfortable working closely with customers and other stakeholders to define and deliver engaging solutions, and I promote a supportive engineering culture emphasising open communication and a sustainable pace.

I have experience with a wide variety of tools – my main development environment at present is **Go**, along with **React**, **TypeScript**, and **SCSS** for web frontends. I also have extensive knowledge of **Ruby** and **Rails**, **Java**, **C++**, and **Objective C**.

Skillset Summary

Go

Experience building high-performance system applications and APIs using Go and common libraries.

Ruby

Expert knowledge of Ruby, Rails, and common frameworks and libraries.

Javascript and Typescript

Excellent JS/TS knowledge on client and server with extensive React and Webpack experience.

HTML / CSS

Expert knowledge of cross-browser HTML and CSS. Particular skills with high-performance responsive front-end development using latest technologies.

Java

Expertise building high-performance distributed processing pipelines with computer vision and ML technologies.

Objective C & Swift

Extensive experience building macOS and iOS apps. Good knowledge of the Cocoa and UIKit APIs.

Testing

Good knowledge of testing strategies and techniques and strong proponent of CI and CD culture.

Other languages

Good working knowledge of C/C++, PHP, Python, Rust. Experience building language extensions in C; Qt; POSIX API; x64 assembly etc.

Databases

Management and optimisation of MySQL, PostgreSQL, SQLite, MongoDB, Elasticsearch, Redis and others.

Development and deployment

Full familiarity with Git, shell scripting, Docker, deployment and hosting systems, AWS, GCP etc.

Project management

Extensive work with Jira and similar tools. Full knowledge of Scrum and other agile processes as a coach.

Design and production

PDF, PostScript, colour management systems and TIFF/JPEG and other image formats. Expert knowledge of all major graphic design tools, including Adobe Photoshop, Indesign and Illustrator. Extensive knowledge of graphic design principles and techniques.

User Experience


Commercial experience designing and building compelling user interfaces for a wide variety of applications.

Education

2002–2007 – University of Edinburgh

Master of Engineering (MEng) – Electronics & Computer Science

An interdepartmental computer science and engineering degree which covered the entire spectrum of computer systems, including physical processor design, algorithms, languages, data structures, AI, and user interfaces.

 +44 7976 121 482

 matt@matt-m.co.uk

 www.matt-m.co.uk

 github.com/mattmacleod

 29 Pevensey Road
London E7 0AR

MATTHEW MACLEOD

TECH LEAD & ENGINEER

Recent Projects

Examples of recent systems and projects I have delivered include:

- ◆ A system for real-time detection and localisation of 10k+ QR code and text-based markers using commodity x64 hardware on a distributed mobile robotics platform, using a custom Java-based computer vision and ML pipeline.
- ◆ A pipeline for 3D object reconstruction and automatic dimensioning of physical objects using real-time LiDAR scans, including a fully interactive web-based 3D visualisation tool for data analysis and export.
- ◆ A system for identifying discussion of scientific research in online news sources using a various NLP techniques, processing hundreds of articles per second.
- ◆ A platform for historical and real-time event identification and extraction from Wikipedia dumps, involving processing multiple terabytes of XML data.
- ◆ Designing and building a custom interactive data explorer UI for database of ~100M records, with extensive filtering, sorting, graphing and analysis tools.

Previous Experience

2015–2022 **Dexory**

Head of Software

Dexory is a startup delivering autonomous robots to the logistics industry. As the first employee, I led the design and implementation of the software stack – including robotics, firmware, operating system, monitoring, admin tools, customer dashboards and dozens of other features. I scaled the software development team to 25+ members as a technical lead and agile coach through multiple funding rounds, and worked with customers to help them build and deploy solutions using our platform.

2013–2018 **Digital Science → Altmetric**

Senior Software Engineer → UI Lead

Digital Science is a group of companies building software for scientists and the wider research community. I initially worked on the laboratory data management product **Projects**, where I successfully carried out the design, development, and launch of a from-scratch re-write as a native desktop application for macOS. I transitioned to the **Altmetric** team at Digital Science, where I developed several high-throughput data collectors and pipelines which identified online discussion of scientific research in real-time. I later moved to the UI Lead role, where I focused on ground-up re-implementations of our flagship internal and external web applications to meet modern technical and user experience expectations.

2009–2013 **tictoc**


Technical Director

Tictoc is a middleweight digital software agency building websites and apps for a client base of around 300 charities, educational institutions and private businesses. I implemented the technical platforms we used to deliver projects, providing a toolset for fast and flexible development of client projects. This included the development of a new, flexible in-house web framework targeted at rapid application development and ease of use. I introduced testing and agile practices to the development studio, and managed the day-to-day operation of the technical team.

2007–2009 **Radge Media**

Creative Director

Radge Media publishes culture magazines across the UK. As the Creative Director, I managed design and layout for monthly magazines and publications. I later moved to head up the company's digital strategy, and implemented a powerful system for cross-channel online and print publishing. This project included complex data management tools and integration with multiple third-party data sources, with the ability to publish content seamlessly across web, mobile and print channels through a variety of XML and JSON feeds as well as integration with Adobe InDesign.

 +44 7976 121 482

 matt@matt-m.co.uk

 www.matt-m.co.uk

 github.com/mattmacleod

 29 Pevensey Road
London E7 0AR