

# Barney Jackson

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Pragmatic, versatile and ambitious generalist in technology with a background in software engineering, an entrepreneurial drive, and an aptitude for complex problem solving. Committed to solving the biggest challenges affecting our planet and society by leveraging technology. Strong communication and leadership skills. Public speaker on topics including the intersection of Computer Science and Social Impact.

## PROGRAMMING SKILLS AND EXPERIENCE

- Architecting and implementing data-oriented infrastructures, distributed and at scale
- Web frameworks including Flask, Django, Ruby on Rails, .NET, Node.js
- SQL, NoSQL and graph databases, including Postgresql, MySQL, MongoDB, Neo4j, TitanDB and Cassandra
- Development tools and services including Vim, Git, Heroku, Amazon Web Services and Docker
- Natural language processing, genetic algorithms and other machine learning algorithms in production
- Experienced and efficient at rapid prototyping

## EMPLOYMENT

### **Chief Technology Officer (CTO): January 2018 – present**

Factmata (fighting misinformation with AI), London, UK

Moved to the UK to replace the founding CTO at a high-profile, early-stage startup with several big-name tech investors (Mark Cuban, Biz Stone, and more). Inherited a complex collection of systems with the aim of rapidly converting the project to a product to take to market.

- Oversaw multiple engineering teams, across disciplines - totalling 8 engineers
- Lead engineering hiring and grew engineering team 2x
- Managed development and deployment of AI components in production
- Designed several large, distributed systems and data processing pipelines
- Responsible for long term technical strategy
- Defined multiple new processes and established engineering culture

### **Senior Member of Technical Staff (Software Engineering): November 2017 – January 2018**

Salesforce.org (enterprise employee engagement and online giving), San Francisco, US

One of the first software engineers to join the new Philanthropy Cloud internal startup, bringing expertise in REST APIs, online donations and the nonprofit technology sector.

- Highly effective code contributor despite no previous commercial experience using Java
- Personally designed and implemented customer facing REST APIs
- Lead design of payment processing architecture and integration

### **Chief Technology Officer (CTO): November 2015 – October 2017**

HandUp.org (crowdfunding for homelessness), San Francisco, US

Became proficient with an inherited application in a very short period of time. As sole engineer, responsible for the entirety of the stack, hosting environment, bringing engineering ideas and insights to product direction, scheduling product roadmap and prioritisation.

- Architected and executed total refactor of donation transaction data model
- Reduced average server response time by over 70%
- Integrated advanced Stripe "Connect" platform to allow tax-deductible donations
- Managed and mentored engineering interns

### **Contract Software Engineer: July 2016 – February 2017**

Plethora (AI automated manufacturing), San Francisco, US

Rapidly became a valuable contributor in a complex engineering ecosystem, in spite of little prior domain knowledge and unfamiliar development processes and tools. Worked across the stack with the web and API engineering teams, as well as liaising with other departments such as business development and sales to build new tools and features.

- Wrote underlying SQL queries and Node.js API for a new internal metrics framework with multiple stakeholders
- Rebuilt user-facing "My Account" backend to new responsive design specification in Node.js and React.js
- Integrated static front-end CSS and React.js built by another external contractor

**Fullstack Software Engineer: September 2013 – October 2015**

Coffee Meets Bagel (online dating service), San Francisco, US

Position awarded through the inaugural Silicon Valley Internship Programme; one of fifteen Computer Science graduates out of hundreds of applicants from top universities throughout the UK. Responsible for monitoring and developing core matching algorithms, extending and improving API functionality to power apps, architecting and implementing new features, as well as continually scaling and optimising all areas of the system as the product grew.

- Migrated and extended chat system, ensuring smooth service for millions of messages a month
- Designed and implemented an in-app chat system, removing dependency on SMS
- Lead the implementation and roll-out of a machine learning recommendation system
- In-house expert on multiple tools including Redis, Firebase, TitanDB and Gremlin query language
- Inventor, implementer and author of patent-pending features

**Co-Founder, Managing Director and Developer: November 2012 – March 2015**

Makexist Ltd. (web and mobile design and development), Edinburgh, UK

Provided bespoke web applications and website development to startups, small businesses and agencies. As Developer, architected and implemented key projects. As Managing Director, responsible for acquisition of new work, handling company accounts and finances, and managing projects and clients.

- Architect, project lead and Ruby on Rails developer for a complex investment portfolio monitoring tool
- Built a highly customised e-commerce website making use of 3rd party APIs and external data sources
- Web developer for multiple mobile apps for National Health Service subcontracts

**Software Consultant: July 2009 – November 2012**

Self-employed, Edinburgh, UK

Provided services such as web development, CMS training and data management nationally to UK councils, as well as subcontracted services to third parties such as the British Vehicle Rental and Leasing Association (BVRLA) and PA Life.

**Customer and Technical Support and Development: June 2008 – July 2009**

e-mango Ltd., Bournemouth, UK

Key member of a web development company in both the support and development teams. Worked closely with large clients such as the International Bar Association, the BVRLA and Islington Borough Council.

**EDUCATION****BSc (Hons) Artificial Intelligence and Computer Science, May 2013**

University of Edinburgh, UK

Dissertation explored optimisations in online search results presentation. Human-computer interaction metrics were analysed proving one variant more effective than Google's interface at the time.

Degree courses included Distributed Systems, Applied Machine Learning, AI Large Practical, Data Integration and Exchange, Text Technologies, Advanced Databases, Algorithms and Data Structures, Computer Security, Natural Language Processing, Natural Language Generation, Machine Translation and Natural Computing.

Nominated for the 2013 national BSc Final Year Computer Science Project Award hosted by CREST at University College London.

**ADDITIONAL INFORMATION**

- Inventor, implementer and author of pending US patents
- Public speaker on the intersection of social impact and computer science, detecting misinformation, and more
- Lead the winning project at an invitation only hackathon in association with Mozilla and USA for UNHCR
- Elementary knowledge of French, Italian and Spanish. Learning Japanese

**PERSONAL INTERESTS**

- Outdoor pursuits such as surfing, skiing, snowboarding, climbing, hiking and sailing
- International relations, their historical origins, and the OpenSource Intelligence movement

**Excellent references available upon request**