Fiachra Matthews

Principal Architect

Overview

Software Architect and Senior Developer with a proven track record of design and delivery of complex enterprise level software systems in highly regulated environments. Has contributed and lead teams through all levels of the product delivery process including requirements gathering, market fit, design, implementation, test and delivery.

Technical skills

Tools & Technologies

Micro-services: Node.js (Express.js, Next.js), Python (FastAPI, Flask)

Infrastructure: Docker, Kubernetes, PubSub, RabbitMB, Apache Kafka, AWS, GCP

App development: Native (iOS, Android), Cross Platform: (React Native, Cocos2d, Electron)

Programming Languages

JavaScript, Python, C++ Obj-C, Java, C#, Swift

Industry Experience

June,2021 – Present
Principal Architect, *Medable Inc.*, Palo Alto
- Create & lead a network of architects
- Provide application architectural solutions to meet business requirements.
- Lead team members to develop architectural strategies and guidelines.
- Work in compliance with company policies and procedures for operational efficiency.
- Recommend new technologies to management to develop robust applications.
- Analyze and troubleshoot architecture-related issues in a timely fashion.

Nov,2017 – June,2021
Senior Developer, Backend, *Medable Inc.*, Palo Alto
- Provide architectural support to product development
- Design and develop advanced applications for the various platforms (e.g. Android, iOS, backend, and web front-end)
- Unit-test code for robustness, including edge cases, usability, and general reliability
- Perform Bug fixing and improving application performance
- Collaborate with cross-functional teams to define, design, and ship new features
- Continuously discover, evaluate, and implement new technologies to maximize development efficiency

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Feb,2013 – Nov,2017 **Head Of Software Engineering**, *Galvanic*, Dublin

Responsible design, implementation, management and delivery to market of HIPAA compliant stress management devices, infrastructure and cross-platform apps targeting the health care, corporate and consumer markets.

Tasks & Responsibilities:

- Management of the software team and development life cycle of the PIP apps and the My Pip cloud infrastructure
- Publishing of multiple apps to both iOS and Android App Stores
- Development and maintenance of a native iOS, Android and OSX SDKs for the PIP
- Developing plug-ins from the SDK to cross-platform development environments (Marmalade & Unity)
- Development of native and cross-platform apps for use with the PIP
- Development and Delivery of a HIPAA compliant consumer cloud service including server and client (Web and native app) components.
- Development and Delivery of a HIPAA compliant, subscription based corporate and health care cloud service to allow our customers gain insights into the well being of patients and employees.

Dec,2011 – Feb,2013 **Software Developer**, *5th Province Ventures, Dublin*

Developer for the iOS and Android app for WISP, a location based social-networking system.

Tasks & Responsibilities:

- Feature Design and Implementation
- Managing source control systems
- Integration of new features with the custom XMPP server back-end
- In app development done using C++ and javascript with tools developed with python

May,2009 – Dec,2011 **Software Team Leader for Irish Robocup team. Post-Doctoral Fellow**, *Hamilton Institute, NUI Maynooth*, Maynooth, Co. Kildare

Tasks & Responsibilities:

- Developing software systems for the RoboEireann Standard Platform League (SPL) team
- Coordination maintenance of the overall software project
- Supervisory roles for students on work placement or 10 week internship projects (Summer Internship in Autonomous Robotics (SIAR))
- Administrative duties include organizing and coordinating travel for the team to compete in International competitions

Teaching Experience

2011 & 2008 **Lecturer**, *Engineering Dept.*, NUI Maynooth

Computer Architecture & Digital Logic for first years. This course was an introduction to the underlying concepts to computational hardware systems.

2008 **Lecturer**, *Engineering Dept.*, NUI Maynooth

As part of the Masters in Biomedical Engineering I development and delivered course a new course entitled "Applied Computing for Engineers". The aim of this module was to assist post-graduate students in how to analyse and present data from a research perspective. Students were taught how to use Matlab for data analysis, Labview for hardware interfacing and Simulink for systems modelling.

2007 **Lecturer**, *Engineering Dept.*, NUI Maynooth

I delivered a six lecture introduction to the theory and practice of digital signal processing (DSP) as part of the Masters in Biomenical Engeneering. This course was designed to help the student to quickly grasp fundamentals of DSP. I also assisted the lecturer in setting suitable exam questions on this material.

Education

2005–2010 **PhD, Biomedical Engineering**, *Hamilton Institute, NUI Maynooth*

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Title	*Integrated Real-Time Control And Processing Systems For Multi-Channel Near-Infrared Spectroscopy Based Brain Computer Interfaces.*
Supervisors	Prof. Barak Perlmutter & Dr Tomas Ward
Description	In this project I led the development of a device that would enable disabled subjects to control computer systems using thought alone. The project involved designing specifications for the hardware and creating and implementing software algorithms for the control and processing of the data and user interaction. Software was development using Matlab, Labview, C, C++ and Python.
2000–2005	**BSc, Computer Science & Software Engineering**, *NUI Maynooth, 1st Hons*, A comprehensive computer science curriculum including modules in software engineering, networking, digital architecture and more. Includes a six month industrial work placement and major final year project
Work Placement	IBM Microelectronics Division (IMD), Damastown, Co. Dublin. Wrote software in VB, Lotous Script and Javascript with the Process Engineering group to improve efficiency in the testing and validating of microchips.
Final Year Project	Development of a USB based orientation sensor for use as a platform for a human motion tracking node. Device firmware was developed in Microchip Assembly while the client driver and front-end were developed using C and C++. This project won first prize in the Hewlett Packard Invent Award in 2005.

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