

DAVID CRADDOCK

SENIOR SOFTWARE ENGINEER

PROFILE

Highly motivated self-starter with an international career portfolio of enterprise, safety critical and real-time projects, whose growing success has been attributed to excellent technical development, project management, communications, problem solving and project planning skills.

A **Chartered Engineer** and dedicated leader with over 20 years' development experience with a solid background in the pharmaceutical, transport, aerospace, defence and financial business sectors. A strong passion for software development, methodologies, team building, international travel, and continuous learning.

PROFESSIONAL EXPERIENCE

SENIOR SOFTWARE DEVELOPER

CMC MARKETS (LSE LISTED) SYDNEY, AUSTRALIA, 2022-PRESENT

12 month contract to integrate a crypto exchange within the existing trading platform to allow customers to trade crypto-currencies and for CMC Markets to manage the transactions.

- Integration with Paxos Crypto Exchange.
- Reconcile daily holdings and trades of crypto-currencies.
- Daily import of sftp file transfers of trade records between CMC Markets and Paxos.
- Backend management of trades and holdings reconciliations for crypto transactions.
- Conversion of existing standard and pro platforms to handle the major crypto currencies including Bitcoin and Etheruem to allow uses to place trades and staff to process transactions.
- Micro-Frontend architecture allowing integration with separate react UI's along with the existing MVC application.

SENIOR SOFTWARE ENGINEER

DASH (FORMERLY WEALTHO2) SYDNEY, AUSTRALIA, 2018-2022

A fintech start-up for advisor managed super funds with an initial development team of 4, tasked to break up a monolith application into microservices as well as develop a completely new front-end along with a new iOS & Android app.

- The system and architecture had to handle fast growth from company inception to having \$3.0 billion funds under administration.
- Responsible for iOS and Android app development, maintenance and release. With custody of both Apple Store and Google Play accounts.
- Responsible for full-stack development and front-end architecture, from database to micro-service to front-end development.
- All cloud based architecture hosted in AWS using self managed kubernetes.
- End-to-end unit testing with high code coverage monitored using SonarQube.
- Event driven architecture allowing clean design and decoupling micro-services making it easier maintaining and updating.
- First and second line technical support for on-call duties and production alerts.
- Collaborating and presenting to internal stakeholders and major share holders.
- Development of financial report generation, using a data sync to redshift to source the data.
- Bug fixing and maintaining the old system whilst in the process of transitioning away from it.
- Releasing micro-services and frontend to test, uat and production environments.
- Proof of concept integrating a crypto exchange for the trading of Bitcoin using Independent Reserve api.
- Google Cloud hosting for mobile app data including Firebase databases.
- Integration of Google maps and places api's.
- Mixpanel integration and reporting for mobile app analytics.
- Auth0 integration for login access.
- Reconciliation of trades and holdings from third parties via daily sftp file transfer.

CONTACT

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TECH STACK

- MVC
- C# .NET Core/Framework
- NUnit
- SQL Server
- AngularJs
- React
- Redux
- React Testing Library
- Javascript
- AWS
- Consul Service Mesh
- Github
- Gitlab

TECH STACK

- Microservices
- MVC
- C# .NET Core/Framework
- CQRS
- MediatR
- NUnit
- React
- Redux
- Redux ToolKit
- React Testing Library
- React Native
- MongoDB
- MongoDB Cloud Atlas
- Postgres
- SQL Server
- Redshift
- AWS
- Firebase
- SNS
- SQS
- Kubernetes
- Docker
- Grafana
- Prometheus
- Azure Devops
- Azure AppCentre

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PROFESSIONAL EXPERIENCE (continued)

TECHNICAL DEVELOPMENT LEAD

CORUM GROUP LTD (ASX LISTED) SYDNEY, AUSTRALIA, 2013-2018

Responsible for leading the development team and improvement processes. Key resource in I.T. strategy and planning meetings as well as coaching and training developers.

- Architecting the next generation of pharmaceutical dispensing solutions. A networked multi-client, multi user desktop application connected to an on premise backend server. A Message bus was used to securely allow third party integration. This was a greenfield product which will have a 20+ year lifespan.
- Lead architect and developer for a gateway application to allow 20+ 3rd party vendors within the pharmacy industry to standardise and secure access to Corum's data, resulting in a more stable operating environment and improved data security. This will allow Corum to financially control access to the data going forward.
- Presented a paper analysing inbound support calls and possible prevention methods, resulting in launching the biggest development change to Corum's main product since release. After rollout, inbound support calls have dropped 25% ensuring the product has been stabilised and is delivering significant performance improvements.
- Led the development of a utility payment phone application for Corum's ecommerce real estate business. The application is designed for android and iOS devices. Development adhered to scrum and agile processes. The app is currently on both the Apple and Google Play stores.
- Coordinated the release and rollout across all Australian states of Corum's main product standardizing the version within all stores and establishing a software baseline going forward. Resulted in less maintenance and support issues.
- Produced development roadmaps for Corum's robotic dispensing and handheld scanning products, whilst formally documenting the current requirements, design and capturing outstanding bugs and issues.
- Lead architect and developer of a pharmaceutical reporting enterprise solution based on Tableau. The fully cloud based solution pulls data back from each store database to a backend data-warehouse for processing allowing Corum's customers to securely logon and visually view or statistically analyse their own performance.
- Led development of a mobile and tablet friendly web based calendar appointment system that integrated into the existing dispense solution.

TECH STACK

- MVVM
- MVC
- WPF
- ReactiveUI
- WCF
- MSMQ
- C# .NET Core/Framework
- NUnit
- AnjularJs
- Angular
- Electron
- Ionic
- Cordova
- SQL Server
- Tableau
- Azure
- TFS
- Jira
- Azure Devops

SENIOR SOFTWARE DEVELOPER

SEA LTD (LSE LISTED AS COHORT PLC) BRISTOL, UK, 2009-2013

Lead software architect for a revolutionary type of criminal enforcement system that had never before been created for use in UK. This was a complex software project using video analytics, ANPR software, Wi-Fi, Bluetooth and Mobile communications and having critical timing and encryption implications with the need to achieve home office type approval.

- Responsible for the choice of project software tools and system hardware, prototyping and evaluating modules before making an informed selection.
- Set-up and administered new process improvement techniques to deliver production code faster with far less man hours than previously required.
- Designed and developed the system so that existing and new products can reuse the same components.
- Responsible for gathering and presenting the system requirements to senior management, developing the system design, talking to suppliers and contractors, organised and schedule delivery times and producing the project plan.
- Developing and leading a team of software engineers using up to date methodologies to issue, track and measure work and performance.
- Created a solution that was based on a video analytics system of my own design, which could determine the state of the lights from a live stream of the signal to know when to arm.

TECH STACK

- MVVM
- MVC
- WPF
- Winforms
- Castle
- C# Framework
- NUnit
- SQL Server
- MySQL
- TFS
- Jenkins
- SonarQube
- Adobe Flex Builder
- Java
- JUnit

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PROFESSIONAL EXPERIENCE (continued)

Railway CAD System

A key developer for a multi-user CAD application used to automate the production of a signalling plan and the associated design documents that capture the UK's rail infrastructure.

Wi-Fi Communications System

Lead architect responsible for creating an application to remotely retrieve encrypted evidence packs containing video and vehicle information securely over Wi-Fi and transmitting the files over an sftp link.

- Captured and analysed the requirements from the customer.
- Designed and coded a solution that would cope with environmental challenges and meet the encryption standards equal of that found in the banking industry.
- Organised the testing and trials before finally delivering the complete solution.
- Developed the design and test documents and user manuals.

Digital Traffic Enforcement System

This was a project for the Transport of London to enforce civil parking offences.

- Developed an electronic write once read many server application for storing encrypted files and was solely responsible setting up and deploying a replication system to continuously take a snap shot of the systems database in case of failure.
- A member of the maintenance and support team. Duties included monitoring the network, various caches and data stores and performing SQL queries to check data integrity. This occasionally involves working off-site on my own to carry out software maintenance work.
- Conducted software acceptance testing with the customer.

Network Rail Operations and Customer Services System

Team developer of a server side application that delivers train paths, timetabling and train movements with the UK to enable safe performance.

Bus Lane Enforcement System

Part of a three man team to develop a civil offence enforcement system for bus lane contraventions. Because the system dealt with civil offences the solution had to adhere to the UK vehicle type approval authority's standards.

- Designed, coded and tested the system.
- Provided system training to customers and met with subcontractors to manage the installation.
- Helped support and maintain the system whilst in operation.

SOFTWARE DEVELOPER

BAE SYSTEMS LTD (LSE LISTED) VARIOUS LOCATIONS, UK, 2005-2009

Mission Mapping and Planning System

This was a program to simulate RAF mission plans and full force sorties.

- Designed, coded and tested individual work packages in Java. .
- Wrote the software specification and test documents for the work and produced the requirements traceability matrix.
- Interfaced with customers and presented product demonstrations.

Nimrod MRA4 Stability Augmentation System

This project was to develop a Safety Integrity Level 4 safety critical and real-time system aimed at improving the stability of the Nimrod aircraft during flight.

- Responsible for modelling and simulating the system components.
- Wrote the software specification and test documents for the work and produced the requirements traceability matrix.
- Interfaced with customers and presented product demonstrations.
- Responsible for test script creation.

TECH STACK

- ADA 83
- ADA 95
- Spark
- MATLAB
- Oracle
- MS Access
- IBM/Telelogic Doors
- Enterprise Architect
- Subversion

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Health and Usage Diagnostics System

Designed and developed components in Java producing code towards a system that logged the maintenance of the RAF fleet. From this, the airworthiness of an aircraft could be determined to ensure the safety of the crew and help reduce out of service delays.

- Coded SQL statements to interface with an Oracle database.
- Created test documents to for each Computer Software Configuration Item to meet the MIL-STD-498 standard.
- The work was conducted using the Capability Maturity Model Integration (CMMI) process improvement approach. This was to CMMI level 5, the highest standard possible and at the time the only company in the whole of the UK to achieve this rating.

Harrier GR9 Mission Computer

This was a Safety Integrity Level 4 project that was valued at over £150M.

- Responsible for designing software components for the mission computer of the Harrier aircraft.
- Developed code and wrote automated test scripts.
- Code developed had to be safety critical and able to run in real time.
- Responsible for developing an in-house database tool to create and track the progress of our teams work packages and monitor team performance.

QUALIFICATIONS

CHARTERED ENGINEER (CENG) Engineering Council, Institute of Technology

MASTERS OF ELECTRONIC & SOFTWARE ENGINEERING (MENG)

University of Leicester, UK
Clarkson University, New York, USA

USER GROUPS

Regular attendee and participant of the following user groups, meetups, tech talks and conferences.

Alt.Net
NG-Sydney
Azure Sydney User Group
GoLang
AWS Beers For Engineers
AWS Summit
NDC Sydney
Microsoft Ignite

TRAINING

SCRUM MASTER Certified

Angular - Course provided by SSW
Introduction to Typescript - Course provided by Microsoft
Querying with Transact-SQL - Course provided by Microsoft
Building Cloud Apps with Microsoft Azure - Course provided by Microsoft
Windows PowerShell Fundamentals - Course provided by Microsoft
Artificial Intelligence - Course provided by Berkeley University.
Computer Graphics - Course provided by Berkeley University.
Software as a Service - Course provided by Berkeley University.
Circuits and Systems - Course provided by MIT and Harvard University.
Team Leading/Building - Course provided by Emerge.
Presentation Skills Training - Course provided by EEF Western.
Report Writing Training - Course provided by EEF Western.
University Liaison Training - Provided by BAE Systems.
Assessment Centre Interviewer - Training provided by BAE Systems.
Introduction to Prince2 - Training provided by SEA.
Securing Web Applications, Services and Servers - Course provided by Learning Tree.
Software Patterns - Course provided by Objektiv.
UML Training - Course provided by Objektiv.
Dimensions Training - Course provided by BAE Systems.
Rational Rose Training - Course provided by IBM.
Ada 95 Programming - Course provided by Objektiv.