

MATTHEW DANG

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Experienced developer passionate about building efficient, simple and maintainable software. Interested in full stack development with C#/Java/Python backends and the latest frontend technologies. Creator of thatsyourjam.com, a popular browser game with over a million plays.

SKILLS

- **Skilled** - C#, WPF, Reactive Extensions, SQL Server | Python, Jupyter Notebooks | C++ 11, Protobuf | PostgreSQL | HTML, CSS
- **Prior Experience** - JavaScript, jQuery, AngularJS | Java | Go | Flask, Django
- **Tools** - Git | Bamboo / Continuous Integration Servers | Docker | Linux Shell

EDUCATION

B.S Commerce/Science (Computer Science) — University of New South Wales

- Co-op Scholarship Program
- Dean's List (2012, 2013)

EXPERIENCE

Optiver Asia Pacific, Sydney — Options Pricing Developer

Jan 19 - Apr 20

Leading APAC derivatives high frequency trading firm

- Was part of the core team responsible for building and maintaining C++ options trading systems and C# WPF desktop applications used by all traders
- Worked with key stakeholders in research and trading on greenfield projects to increase the automation and scale of wholesale trading operations

Achievements

- Developed a tool to automate the generation of indicative prices for a large number of option strategies, enabling the institutional trading team to onboard millions of dollars of revenue from new counterparties
- Built a C++ service to automate email parsing and pricing of incoming quotes from external brokers into the trading database, freeing up wholesale traders to do more analysis work
- Implemented an algorithm and user interface logic to allow traders to accurately adjust option pricing parameters in response to changes in portfolio positions
- Successfully delivered a new version of the company's Excel plugin, a critical tool used by all trading desks and the risk team to view portfolio risks, option model prices and trading parameters

- Resolved performance issues compared to the legacy Excel plugin by utilising a more efficient architecture (Windows C++ COM server on the client multiplexing data across multiple Excel instances)
- Built a report in Python to monitor the accuracy of option prices being used in autotraders, uncovering a number of costly pricing misconfigurations and regressions in the trading system

Optiver Asia Pacific, Sydney — Graduate Developer

Jan 17 - Dec 18

- Wrote an application in Go to calculate detailed trade quality breakdown for information across different time intervals
 - Joined and replayed data across multiple trading systems to produce data for millions of trades each day across all the major Asian stock markets
 - Used profiling analysis to implement optimisations that reduced processing time by ~40%
- Added a feature to allow traders to perform historical order book analysis. Involved adding support for a desktop application to be able to query and load data from a time series database

Ebix Australia, Sydney — Software Developer (Co-op Internship)

Jan 14 - Jun 14

- Built, tested and launched a responsive travel insurance quoting mobile/tablet site (AngularJS) for a client, integrating with an existing ASP.NET backend

News Corp Australia, Sydney — Software Developer (Co-op Internship)

Jul 13 - Dec 13

- Developed an Android tablet/mobile product for The Australian and the metropolitan mastheads

PERSONAL PROJECTS

That's Your Jam — Web Browser Game (<https://thatsyourjam.com>)

- Browser game based on recalling song lyrics. Features collaborative and competitive online multiplayer. Played over a million times.
- Technologies — Python, Flask, Web Sockets, JavaScript, jQuery, Nginx

Waywords — Mobile Game (Android: <https://bit.ly/2ZYt15H>, iOS: <https://apple.co/2BgmNV>)

- Anagram solving game built with the Flutter/Dart mobile framework

Maze Visualisations — Web Browser Interactive (<http://matthewdang.com/mazes/>)

- Showcases various algorithms for maze creation and pathfinding which can be altered in real time

REFERENCES

References available on request