

# Tom Lynch

Melbourne, Australia - GMT +11 hours

☎ +61 434 417 278 | ✉ [tomglynch@gmail.com](mailto:tomglynch@gmail.com) | 🌐 [tomglynch](https://tomglynch.com) | 📱 [tomglynch](https://www.linkedin.com/in/tomglynch)

## Summary

Experienced Software Engineering Manager with a proven track record of leading high-performing teams and delivering complex, scalable software solutions. Skilled in architecting and implementing microservices-based systems, leveraging modern design patterns and best practices. Passionate about building robust, secure, and user-friendly applications, with a keen eye for identifying and mitigating security vulnerabilities. Proven ability to drive technical direction, mentor engineers, and foster a culture of continuous improvement. In my spare time, I enjoy building, riding, and racing bicycles, creating audio visual DJ sets and blogging.

## Experience

### Zero Hash

Melbourne, Australia (Remote)

SOFTWARE ENGINEERING MANAGER

Jul. 2022 - Feb. 2024

- Spearheaded the Participants team, a fully remote, globally distributed team, in the development and launch of two business-critical systems: an customer jurisdiction check system and a redesigned KYC/AML onboarding flow
- Mentored and guided a team of six engineers, fostering their professional growth and technical expertise through regular 1:1s, constructive feedback, and opportunities to tackle challenging projects
- Actively cultivated a culture that embraced technical debt as a catalyst for team growth and system enhancement
- Drove strategic technical direction and decision-making for the Participants domain, ensuring alignment with the company's overall architectural vision and business objectives
- Demonstrated strong communication and stakeholder management skills, effectively articulating technical concepts, project updates, and potential roadblocks to both technical and non-technical audiences

SENIOR SOFTWARE ENGINEER

Jul. 2021 - Jul. 2022

- Developed and implemented key features for a participant management platform, including new microservices relating to modifying and retrieving settings
- Contributed to the transition of a platform from a monolithic architecture to a microservices-based design, incorporating CQRS principles, to enhance system agility, stability, and maintainability
- Implemented a new, more robust real-time data streaming service in Go, replacing a pre-existing service that had reliability and testability issues, utilising WebSockets for real-time communication.
- Improved the reliability and maintainability of the greater user data management system by designing and implementing integration tests to enhance the system's ability to reliably handle user requests

### WBP Rating Valuation Services

Melbourne, Australia

SOFTWARE ENGINEER

(contract) Oct. 2020 - Feb. 2021

- Used machine learning and linear regressions via Scikit-learn, Pandas and Python to value commercial properties
- Reduced complexity and increased valuation accuracy by distilling 91% of commercial properties from 26 to 5 property subgroups
- Introduced a new factor to be applied to commercial property valuations based on the location using nearest neighbour search and normalisation of property age and size, improving valuation accuracy by over 25%

### Huglo

Sydney, Australia (Remote)

LEAD SOFTWARE ENGINEER

(contract) Sep. 2019 - Aug. 2020

- Developed an electricity price comparison engine built with Django, to compare all plans Australia wide, saving customers an average of 15%
- Implemented a scraper to continuously scrape, parse and process over 7000 constantly updating energy plans using Python on AWS ECS and Fargate
- Managed software system design in consultation with the CEO, balancing reliability, maintainability and scalability
- Lead team in developing the final product, a React web-app

### ClaroKey

Msida, Malta (Remote)

ADVISOR

(contract) Nov. 2018 - Jun. 2019

- Developed the business model and token economics of a new cryptocurrency in consultation with the directors
- Worked in close consultation with BDO and PWC Malta to ensure the token sale was compliant with Malta's regulatory framework
- Reviewed and amended the token's smart contracts written in Solidity

### Mo Works Creative Agency

Melbourne, Australia

CRYPTOCURRENCY ADVISOR, SOFTWARE ENGINEER, GROWTH HACKER

Oct. 2017 - Mar. 2019

- Guided cryptocurrency startups running ICOs through the marketing and raising process, resulting in over \$20m in tokens sold for clients
- Proactively detected and mitigated hundreds of attempted scams before ICO launches by developing Node and Python Telegram bots
- Halted an ETH address spam attack on Telegram, alerted and reduced the severity of a client of a time sensitive DDOS attack
- Performed requirement analysis and designed the architecture for the Zukaz voucher app
- Attended conferences and networked with global blockchain leaders in Europe to promote both Mo Works and our clients
- Prepared business models, white papers and token economic models

## Trouble Juice

CO-FOUNDER, FOUNDING ENGINEER

[troublejuice.co](http://troublejuice.co)

Feb. 2017 - present

- Co-founded Trouble Juice, an online platform to promote emerging musicians, and growing to over 200k page views
- Designed and built the Trouble Juice website using WordPress, hosted on AWS
- Set up our mail server, automatic backups and continuously improved SEO

## Axxin - Biomedical Diagnostic Instruments

SOFTWARE TEST ENGINEER

Melbourne, Australia

Oct. 2016 - Feb. 2017

- Wrote and executed strict software verification and validation protocols to allow our medical diagnostic instruments to gain FDA (US) approval
- Identified software bug in calibration system causing intermittent incorrect test results on thousands of machines
- Conducted code reviews and suggested optimizations to the source code

## Let's Talk Medical Research / University of Melbourne School of Medicine

WEB DESIGNER AND DEVELOPER

Melbourne, Australia

Mar. 2016 - Aug. 2016

- Consulted with researchers and university staff to design and build web-app using AngularJS
- Connected web-app via API to a form backend platform to reduce unnecessary complexity

## Bells Pure Ice

TRANSPORT ALLOCATOR

Melbourne, Australia

2013 - 2015

- Received ice orders, planned routes for drivers to most efficiently deliver the product
- Streamlined data entry processes through automation, significantly improving efficiency and reducing manual errors

## Personal Projects

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### Toms Telegram Bot Collection

FOUNDER, SOFTWARE ENGINEER

[telegramubots.com](http://telegramubots.com)

Aug. 2018 - present

- Built a collection of bots to reduce spam in large Telegram groups using Express and Node.js
- Ran the service with zero cost for the first two years by leveraging Glitch
- Scaled to > 2 million actions per month, monitoring groups with upwards of 50 million total users

### Pentesting

ETHICAL HACKER

2017 - Present

- Found and exploited vulnerabilities in the AFL, Spintel and Quixi with code and endpoint inspection using Chrome DevTools and Python scripts
- Followed a responsible disclosure approach with aforementioned organisations, proposing solutions resulting in vulnerabilities being patched
- Focus on code and endpoint inspection to find sensitive data exposures

## Skills

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<b>Languages / Databases</b>	Go, Python, TypeScript, JavaScript, Java, LaTeX, PostgreSQL, Redis, SQL, CouchDB
<b>Frameworks / Libraries / Tools</b>	NATS, Django, Eleventy, React.js, Node.js, Express, Pandas, Metabase, Git
<b>Infrastructure / Config</b>	Kubernetes, Argo, Unleash, Prometheus, Grafana, Loki, APM, Opsgenie, AWS, Docker, Linux, Netflix
<b>Marketing</b>	SEO, Google Analytics, Growth Hacking
<b>Soft Skills</b>	Communication, Collaboration, Active Listening, Team Leadership, Project Management, Decision-Making, Problem-Solving, Continuous Learning, Adaptability, Initiative

## Achievements & Recognitions

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2021	<b>Hacker News #2 post</b> Who won the Amstel Gold Race? Human error in photo-finishes	<i>The Internet</i>
2019	<b>Leaders in Communities Award</b>	<i>University of Melbourne</i>
2018	<b>Lead Presenter</b> Intro to Blockchain Technology, Cryptocurrencies and ICOs	<i>Hatch Quarter</i>
2017	<b>Winning Team</b> Cluster and Cloud Computing Twitter data project	<i>University of Melbourne</i>
2015	<b>World Champion</b> Track	<i>Cycle Messenger World Championships</i>
2014	<b>President</b> Melbourne University Cycling Club - MUCyc	<i>University of Melbourne</i>
2010	<b>College Captain</b>	<i>St Bernard's College</i>
2009	<b>Australian Defence Force Leadership Award</b>	<i>St Bernard's College</i>

## Education

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### ME, Master of Engineering (Software)

THE UNIVERSITY OF MELBOURNE

Melbourne, Australia

2015 - 2019

### BSc, Bachelor of Science (Mechanical Systems)

THE UNIVERSITY OF MELBOURNE

Melbourne, Australia

2011 - 2014