

CONTACT

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Github (Clickable)

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TECHNOLOGIES

Data Engineering

Spark, EMR, AWS Glue, Apache Airflow, Apache Kafka, Amazon S3

Data Science

LightGBM, XGBoost, Sklearn suite, Pandas, NumPy, Jupyter Notebooks

ML Ops

AWS SageMaker, AWS Lambda, Docker, Kubernetes

Other

Streamlit, AWS Athena, Linux, OSX

LANGUAGES

Daily

Python, SQL, Scala

Occasional

Java, Kotlin, JavaScript, C, VBA

MISCELLANEOUS

Mentoring and public speaking

Over the years I have enjoyed mentoring entry-level tech workers from Australasia across the tech space. During 2022 I worked with TechWomen NZ alongside another mentor to facilitate a peer group mentoring circle for entry-level tech workers. More recently in 2023, I have dipped my toes into public speaking on my experience as a Data Scientist with a physics background.

Interns

I have also worked with the **University of Canterbury** and the Master of Applied Data Science program to take on interns at Ströer each summer since 2021. This has been a valuable experience teaching as it allowed me to solidify my understanding and develop my ability to break down complex topics.

Talented School Students Award 2013

Administered by the Royal Society of New Zealand this scholarship entailed a pilot focussed taste of basic astronaut training at **NASA's** U.S. Space & Rocket Center.

TOM MARSH

EXPERIENCE

Ströer Labs NZ - Data Scientist

FEBRUARY 2018 - Present

Company: Ströer Labs NZ is a New Zealand based development house for the European digital programmatic advertising company Ströer. While working in an AGILE environment, I picked up many different programming languages and technology stacks.

Role: I started working for Ströer as a **Java-based Software Engineer** before being given the opportunity to help start a data team for our New Zealand branch. This allowed me to experience the full spectrum of data roles including; **Data Engineering**, **Data Science**, and **Machine Learning Operations**. Giving me a solid foundation for taking projects from end to end.

Projects: These ranged from typical classification and numeric prediction to optimisation and risk management. As most of the data was categorical in nature this led to mainly decision tree-based algorithms and timeseries analysis. The datasets being in the **TB and PB data** range meant utilising distributed computing platforms such as Apache Spark was critical.

Highlights: Reducing the time taken to render impressions on the page by 50% (generating tens of **millions of additional Euros** each year). Reducing outgoing data costs for some of our applications by up to 35% (saving tens of thousands of USD each year). Introducing versioning and reporting tooling that is usable by all walks of employees.

Foodstuffs South Island

MARCH 2011 - FEBRUARY 2018

Company: Foodstuffs South Island Co-operative is a market leader in New Zealand's Retail Grocery industry. The arm of the company that I worked for facilitated the logistics and storage of chilled and frozen goods.

Role: I began working as a storeperson before becoming a forklift driver then supervisor of the graveyard shift and finally an **automation engineer**.

Projects: The relevant tech experience from my time at Foodstuffs SI comes from the final couple of years and revolved around automating various tasks and optimising parts of the general operational workflow. Other projects included introducing a series of automated reports and analytics tools for use by upper management.

Highlights: Some of my projects were successful enough to gain the company **global recognition for efficiency**.

EDUCATION

MSc - Physics - University of Canterbury

JULY 2022 - JULY 2024

My area of research was in atmospheric physics, specifically in how extreme precipitation events change over the country in a warming climate. To achieve this we analyzed over 4000 years of model simulation at various spatial and temporal resolutions. I gave a talk on this work at the Meteorological Society of New Zealand's annual conference 2023. This work was also a collaboration with the National Institute of Water and Atmospheric Research (NIWA)

BSc - Physics & Computer Science - University of Canterbury

FEBRUARY 2015 - NOVEMBER 2017

My undergraduate capstone project was in solid state physics where I grew Y2SiO5 thin films to be doped with rare earth elements and used as quantum information devices.

This taught me many practical lab skills and how to take projects from concepts to minimum viable products. We were successful in proving the efficacy of Pulsed Laser Deposition for these devices.