

# Mitchell Bird

Software Developer



Developer with 3+ years experience in the aerospace industry. Extensive experience using analytical and problem-solving skills to deliver timely solutions. Solid understanding of numerical modelling techniques and best coding practices.

Recently taken an extended period of time off to improve my software development skills and complete several personal projects. Looking for a role that I can grow into and further develop these skills.

## Contact

- ✉ contact@mitchellbird.com
- 📍 Auckland, NZ
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- 📺 LinkedIn
- 🐙 Github

## Skills

- Python
- Git
- CI/CD
- TypeScript
- React
- CSS
- RESTful APIs
- Docker
- Next.js
- SQL/PostgreSQL
- Node.js
- C++
- C



## Interests

- Surfing
- Hiking
- Reading

## Professional Experience

### Thermofluids Analyst, Rocket Lab

Sep 2022 - Sep 2025 | Auckland, NZ

- Developed and maintained internal tools for modelling and analysis. Deployed to wider group, maintained and improved with CI/CD.
- Lead the analysis of the venting system for the Neutron rocket and supported the development of the mechanical design.
- Analysed hardware requirements for the Electron rocket.
- Optimised the aerodynamic geometry of the reusable Neutron rocket.
- Analysed numerical data to understand trends, sensitivities and trade-offs to inform and optimize vehicle and system design.
- Advisor to other teams regarding questions on aerodynamics, thermodynamics and fluid mechanics.
- Owner and point of contact of multiple technical projects, scheduling deliverables and updating stake holders.
- Organised and led meetings to internal stakeholders disseminating analysis conclusions and updates.
- Regularly represented the interests of my team to the wider group.

## Projects

### RouteCause

Created a service to approximate cost and emissions released for a given car journey.

- Built a full-stack, scalable web application using React, Next.js, Node.js, and TypeScript, connecting user input to backend services via RESTful APIs.
- Designed and managed a PostgreSQL database, implementing safe and efficient queries.
- Gained experience using state-dependent React patterns and styled components with CSS.
- Integrated CI/CD pipelines to automate development, testing, and deployment workflows.

## Education

### University of Southampton Master of Engineering (1st Class)

Aeronautical & Astronautical Engineering

Sep 2018-June 2022 | Southampton, UK

Relevant modules:

- Advanced Computational Methods
- Numerical Methods
- Systems Design and Computing
- Mathematics for Engineering and the Environment (Part I and II)

## New Zealand Work Rights

### Residence Visa Holder

Right to work in any role for any employer in New Zealand.

## References

Available upon request.