Lucas Eng

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Career Objective

I am a recent graduate looking for a junior role in backend engineering. Today, data plays a huge role in the modern technology environment. It's the cornerstone for user personalisation, analytics, and optimised decision-making. Hence, controlling how that data flows in a system is of such high importance. Throughout my tertiary studies, I have developed a strong passion for API development and deployment, and I am seeking the opportunity to continue developing my expertise in backend development.

Seeing people thrive motivates me; it's a core part of who I am, and I firmly believe that it's very much a core part of the technology sector, too; how do we positively disrupt the way people do life? I aspire to use my knowledge of software development to maximise technology's impact on all people. I want to see how my solutions have a real purpose and a real impact on how people connect, work, and learn.

Skills Summary

Time-Management
My ability to plan and prioritise tasks will be an asset to any team. I have developed the skills to optimise my use of time to maximise productivity and meet deadlines. Through group projects at university, many students have commented on my planning and organisation as a real strength.

Logic-Based Problem-Solving
Problem-solving is a vital part of any developer's toolbox. However, my systematic approach to problem-solving is an important distinction that allows me to create well-formed and well-reasoned solutions. Whilst creative problem-solving can sometimes be fruitful, problem-solving based on logical deduction and inference is often the most practical yet valuable approach.

Teachability
Because I recognise that learning and personal development is a life-long process, I am willing to learn, grow and adapt by being humble and curious. I'm receptive to new ideas and applying new concepts. I firmly believe every opportunity is a chance to learn something new, so I am always trying to continuously broaden my skill set.

Leadership
I possess effective communication skills, careful decision-making, and empowering others. In a team environment, lifting others up, inspiring trust and giving guidance where needed are vital to a flourishing and collaborative team. My leadership skills were recognised in my ultimate year of High School, where I was awarded the role of Head Boy.

Mentoring

As a youth worker, mentoring has been one of my main roles. I have developed the skills to support, empower and challenge young people to facilitate positive growth as they transition from teenagers into young adults. These skills are not exclusive to mentoring only young people but also translate to supporting and working with all ranges of people.

Experience Summary

Youth Worker   Jan 2022 – Current
Edgewater College

Basketball Trainer   Feb 2023 – Current
Yonsei Basketball Academy

NCEA Exam Supervisor   Nov 2022 – Dec 2022
Howick College

Trading Specialist   Oct 2017 – Jan 2022
The Warehouse Ltd Botany Downs

Education

Bachelor of Science – Computer Science, Statistics   Jun 2020 – Jun 2023
The University of Auckland
GPA: 7.917

Level 3 Certificate in Youth Work   Jun 2022 – Dec 2022
Careerforce

NCEA Level 3, NCEA Scholarship – Technology   2015 - 2019
Botany Downs Secondary College
Head Boy

Technical Skills

JavaScript (Node.js)
- Strong grasp of Node.js and Node Package Manager (npm)
- Proficiency in REST API development using Express.js.
- Fluency in using the Mongoose package to access/modify data from a MongoDB database.
- Use of middleware functions and JWT tokens to implement authentication and authorisation.
- Use of Passport.js to implement OAuth 2.0.
- Use of Nodemailer for server-side-based email confirmations.
- Understanding of professional security practices such as the use of environment files.
- Ability to carry out unit testing via Jest and Supertest.

JavaScript (React)
- Proficiency in using State hooks and Effect hooks to update the behaviour of a dynamic web application.
- Comprehensive understanding of component interactions via props.
- Fluent use of JSX to structure component rendering.
- Use of MUI to render aesthetic yet functional components.

C#
- Use of .NET and Entity Framework Core to develop REST APIs
- Use of JWT to produce Bearer tokens.
- Strong understanding of claim-based authorisation.
- Use of Swagger UI to visualise and interact with API resources.
- Solid grasp of DTOs and the use of LINQ for querying a MySQL database.

AWS
- Proficiency in setting up servers in EC2.
- Understanding of API deployment via proxy integration using API Gateway.
- Basic understanding of Amazon S3 and AWS Lambda.

Git
- Creating and checking out branches
- Making commits and pushing commits
- Basic understanding of merge requests
- https://github.com/lucaseng

Other
- Fluency in Python, Java (including OOP), R, SQL, HTML and CSS
- Comprehensive understanding of Multivariable Calculus, Linear Algebra, Proof Methods, Probability and Probability Distributions (including Bayesian Statistics), Markov Chains, Statistical Inference, and Asymptotic Complexity (Algorithm Analysis).

Project Experience

Capitalise   https://www.capitalise.space

Capitalise is an online capstone project gallery showcase for Computer Science students at the University of Auckland. My role on this project was as a backend developer/cloud engineer. I was responsible for developing and deploying our NoSQL database and API. The project was delivered to our primary stakeholder well before the deadline and surpassed the minimum viable product requirements.

NCEA Note Repository   https://github.com/Lucaseng/NCEANoteRepository

Currently in the final stages of development, NCEA Note Repository is a web application I have developed from scratch, allowing New Zealand high-school students to collate and

share their notes. The backend API was written using ASP.NET Core, connected to a MySQL database. React.js was paired with Material UI for client-side development.

The Game Academy   https://github.com/lucaseng/theGameAcademy

A basic HTML, CSS and JS web application that uses API endpoints (written in ASP.NET Core) to enable user functionality. This web application is set up to clone the popular website chess.com. Both the client-side and server-side were implemented by me.

Arawatta Dental Centre   http://www.arawattadentalcentre.com.au

This is a WordPress website I developed and hosted for a client based in Melbourne, Australia. I learnt the fundamentals of DNS, Web Hosting Architecture, and responsive web design.

YouTube   https://www.youtube.com/@brainstormnz

I post walkthrough videos for various STEM papers in the NCEA syllabus. Generally, I specialise in exam walkthroughs for statistics papers. I have also published walkthrough guides on Python programming and algebra.

Volunteer Experience

Youth Leader and Projectionist   2016 – Present
East City Wesleyan Church

Basketball Coach   2022 - Present
Edgewater College

Interests

I have a keen interest in watching mixed martial arts and basketball. I enjoy spending my free time watching the UFC and teaching young people about the fundamentals of Basketball. I also enjoy running in my spare time, aiming to run 25 km a week on average.