Nathan **Sing**

SOFTWARE DEVELOPER · FRONT-END EXPERT · COMPUTER SCIENCE MAJOR

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Skills

Core Technology	Python, JavaScript (ES6+), TypeScript, Go, Java, SQL, HTML+CSS, .NET
Frameworks	React.js, Next.js, Node.js, Express.js, MySQL, Tailwind CSS
Tools	Git, GraphQL, SASS, REST APIs, Trello, Confluence, Microsoft 365
React Libraries	Redux, Styled-Components, React Router, React-Hook-Form, React Table

Experience

Resolve Software Group

SOFTWARE DEVELOPER   02/22-04/23

- Implemented enterprise-level case management desktop applications supporting numerous large Australian corporations using .NET, MySQL, REST API, and HTML/CSS
- Implemented comprehensive case-management dashboards, offering a rich visual summary of critical case details to enhance corporate decision-making processes
- Automated and optimized custom email responses to stakeholders improving core application functionality
- Designed and optimised important database queries for fetching hierarchical related case information improving query time by 15% for important stakeholders

Appen

ONLINE TRANSCRIPTIONIST (CONTRACT ROLE)   02/20-02/22

- Remotely transcribed audio files with a 98% accuracy rate into English text for machine learning algorithms
- Role required excellent English grammatical skills, and in-depth knowledge of the language's syntax
- Completed an average of two hundred and fifty audio utterances per second in ninety-five words per minute

Projects

Modern Clothing E-Commerce Web App

HTML/CSS, REACT, NODE.JS, EXPRESS.JS, STRIPE, FIREBASE/FIRESTORE

- A full-stack web app that allows customers to purchase clothing through a real-world payment system
- Implemented RESTful API using Express.js allowing users to perform various actions such as viewing, saving and purchasing store items
- Created a secure payment gateway using Stripe API for payment handling as well as saving important customer credit card information
- Used Google Firebase with JSON Web Tokens for enabling users to register, login and manage their account securely

Interactive Maze Solver and Algorithm Visualizer

REACT, JAVASCRIPT, HTML/CSS

- Uses dynamic visualisations to demonstrate the performance of different path-finding algorithms against randomly generated mazes
- Compares performance of path-finding algorithms such as Depth-First Search, Breadth-First Search, and A* Search
- Implemented random maze generation with a modified version of Prim's Algorithm with random selection
- Created with React and vanilla JavaScript to implement all data structures and algorithms, without reliance on external libraries

Content Relationship Management Application

REACT, GO, DOCKER, MONGODB

- An online CRM tool that provides an online contact book for storing personal relationship details
- Followed an agile scrum methodology while collaborating with a team to develop the app
- Developed different models such as a use-case, domain, class, domain class, and state machine model
- Used Postman for unit, functional and integration tests

Education

University of Melbourne

BACHELOR OF SCIENCE (COMPUTER SCIENCE MAJOR)   2022

- Related Courses: Algorithms and Data Structures, Object-Oriented Software Development, Database Systems, Software Modelling and Design, Computer Systems, Models of Computation
- Member of the Computing and Information Systems Student Association (CISSA)