

# Carney Cheng

[carneycheng.com](http://carneycheng.com)
[linkedin.com/in/carney-cheng](https://www.linkedin.com/in/carney-cheng)
[carneyc12@gmail.com](mailto:carneyc12@gmail.com)
 (647) 250-0011

## SKILLS

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**LANGUAGES:** Python, Go, Node.js, Typescript, Javascript, Haskell

**PARADIGMS:** Functional Programming, Object-oriented Programming, Test-Driven Development, Agile Development

**FRAMEWORKS AND SERVICES:** Express.js, React, VueJS, Docker, Kubernetes, Google Cloud, AWS Lambda, GraphQL

## EXPERIENCE

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### SENIOR SOFTWARE ENGINEER | MEDICONCEN

SEP 2020 - PRESENT

- Worked on the Blockchain-based Insurtech team, in **Go**, **Python** and **Node.js**. Led a 4-person team to the develop an insurance claim and payment service.
- Containerized existing services with **Docker** and **Azure Kubernetes Service**, enabling easier environments segregation and increasing maximum system throughput from 80 per second to 1000+ per second.

### WEB DEVELOPER | WEBS S'UP

APR 2019 – JUL 2020

- Led a 3-person team to develop Document Parsing System with a **TDD** cycle which resulted in an improvement in report accuracy by 30%, and reduction of monthly report processing time from 14 days to 1 day.
- Reduced image parsing time by 90% by developing an algorithm for running post-processing and OCR services in bulk concurrently with dispatcher pattern.
- Implemented a system capable of handling a 1000 document input parse under 2 minutes versus the requested 30 minutes time-frame.
- Created **test-suites** and **CI/CD** pipelines, increasing system stability and halving release cycle.

### FREELANCE DEVELOPER | TIGOD

JUN 2015 - APR 2019

- Designed and created a gift customizing website for a client, with a peak 100+ concurrent users. 3 more variants were created due to customer satisfaction.

## PROJECTS

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### DOCUMENT COMPARER | TYPESCRIPT, FUNCTIONAL PROGRAMMING, GOOGLE CLOUD

FEB 2020

- Implemented as **micro-services** using **Google Cloud Functions** and **Firestore**, with asynchronous communications facilitated by **Google PubSub** and **Firebase Cloud Messaging**.
- Created a Photoshop like UI for specifying key areas in PDF for the initial training of Object Detection Models, using **SVG** with **React** and **Redux**.
- Developed an algorithm for extracting key-value datas from tabular images, by calculating and combining vertices from **Google OCR** and **AutoML Vision Object Detection** results.

### FOREX SNATCHER | PYTHON, C++, MACHINE LEARNING

Nov 2018

- Created a system in **C++** for storing and redistributing tick data from forex brokers, with a <1 ms latency.
- Developed a back-testing suite in **Python**, which simulates forex trading with an interface for testing custom strategy with historical tick data.
- Optimized trading algorithms by using ensemble learning for predictive analysis with **Python** and **scikit-learn**.

## EDUCATION

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### AUSTRALIAN NATIONAL UNIVERSITY

B.Eng in Software Engineering

SEPT 2016 - JAN 2019

Cum. GPA: 3.8 / 4.0