

# Raphael Jeong Hin Chin

734-882-9085 || [jeonghin@umich.edu](mailto:jeonghin@umich.edu) || [linkedin.com/in/jeonghin-chin](https://www.linkedin.com/in/jeonghin-chin) || [www-personal.umich.edu/~jeonghin/](http://www-personal.umich.edu/~jeonghin/)

## EDUCATION

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**University of Michigan**, Ann Arbor, Michigan, U.S.A.  
B.S. in Statistics; B.S. in Data Science

**Expected Graduation:** May 2023  
**GPA:** 3.9/4.0

**Concentration:** Statistical Computational Methods, Database Management System, Applied Regression

**Certificate** : [Web App and Django](#), [Intro to Data Science in Python](#), [Machine Learning in Python](#)

## PUBLICATION

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- **Chin, J.H.**, & Li, H., & Fowler, R. (2021), Proof of Concept: An Algorithm for Consideration of Students' Personalities in Team Formation. Annual Conference of the American Society for Engineering Education, [Virtual](#)
- **Chin, J-H.**, Gao, Y., Li, H., Su, M., & Fowler, R. (2020). Predicting team project score: It's more about team harmony and less about individual performance. Annual Conference of the American Society for Engineering Education, [Virtual](#)

## EXPERIENCES

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**Parcel Health, MI, USA**

**June 2021 – Present**

Software Engineering Intern

- Developed a web application to display risk estimation of a certain disease to help patients adhere to their prescribed medications.
- Spearheaded the design of an ER database that focuses on minimizing data redundancy, but also containing sufficient attributes to automatically update the risk estimation for each patient's disease.
- Leveraged knowledge in Google Colab, Numpy, Pandas, Scikit-learn, Git

**University of Michigan Tandem Lab, MI, USA**

**Sept 2019 – Present**

Research Assistant & Data Analyst

- Collaborated with Dr. Robin Fowler and Tandem Lab to produce and analyze data to determine the factors that affect students' teamwork skills from the data collected by a learning app developed by Tandem.
- Analyzed data using R, Python and computational statistics skills such as bootstrap, k-means clustering, and cross validation to obtain useful information from the data.
- Spearheaded the design of an [unsupervised learning algorithm](#) to infer clustering on students' dataset in order to separate students into their best fit teams through traits and personality rather than faculty's intuition.
- Presented research findings to research mentor and co-authored a research papers to be submitted to ASEE conference.
- Leveraged knowledge in Google Colab, Numpy, Pandas, Scikit-learn, Git

**Lean Yit Hardware Trading, KDH, MALAYSIA**

**May 2020 – Aug 2020**

Software Engineering Intern

- Managed, conducted market and user research, and built a business landing [page](#) which allows customers to select and view hardware items sold by the company.
- Boosted the shop's website to become the top results returned by search engines and increased the number of customers visiting the shop by 20% despite the pandemic.
- Outlined the design of an entity-relational database that focuses on minimizing data redundancy and execution time.

## PROJECTS

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**"Local Business Going Online" Program**

- Single-handedly created more than 6 free [websites](#) for business owners to promote their businesses amid the COVID-19 pandemic and gave free consultations on issues related to websites and web hosting.
- Provided technical support on database related issue and created entity-relational databases for the owners.
- Leveraged knowledge in Google Colab, Git, HTML, CSS, Javascript, SQL, NoSQL, PHP

**Fakebook Database**

- Designed the relational database to store information for the fictional social media Fakebook (basic and simpler version of Facebook)
- Built a Java application that executes SQL queries against a relational database and places the results in special data structures.
- Formulated two types of databases: relational database using Oracle and non-relational database using MongoDB.

**Market Simulator**

- Simulated the stock market using C++ by taking in inputs and simulate the relations between buyers, sellers, commodities and traders.
- Implemented a streaming algorithm to look at the optimal point in which to buy and sell to achieve highest profit margin.

## SKILLS

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**Programming Languages**

C++, R, HTML, CSS, Python, JS, SQL

**Technologies**

Git, NumPy, Tidyverse, Oracle, Django, Jupyter Notebook