Leon Yee Leong Tan

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LinkedIn: linkedin.com/in/leon-yl-tan **Github:** github.com/LeonTan828 **Website:** leontan828.github.io/personal-website/

Education

University of Wisconsin-Madison Graduated: Dec 2019

B.S. in Computer Science and Biology

CGPA: 3.48/4.00

Relevant Coursework: Bioinformatics, Operating Systems, Algorithms, Artificial Intelligence, Cryptography, Databases

Skills

- **Proficient:** Java, Python, C, React.js, Bootstrap, CSS, Javascript, HTML5, Git
- **Exposure:** MySQL, C#, Unity, PHP, R
- **Verbal:** English, Mandarin, Malay, Hokkien, Cantonese

Project Experience

MusicPear

A music social media program that allows users to save, manage and share their playlists with other users

- Optimized data retrieval by designing an efficient SQL schema using **MySQL**
- Handled data communication and queries between the **Unity** app and database using **C#** and **PHP**
- Ensured effective and efficient collaboration among team members by organizing and managing the application on **GitHub**

Personal Website - https://leontan828.github.io/personal-website/

- Showcased personal information by building a responsive website from scratch, based on bootstrap framework using **React.js** and **CSS**

Exon-Intron Predictor

A machine learning program that predicts exons and introns locations of pre-mRNA sequences

- Constructed a machine learning program by implementing the Hidden Markov Model on pre-mRNA sequences with **Python**
- Successfully predicted the locations of exons and introns in pre-mRNA sequences with 90% accuracy by using the machine learning model after training it with existing datasets
- Trained an accurate model by using the Baum-Welch Algorithm to estimate and adjust the parameters of the model

Map-Reduce

A MapReduce library on C

- Improved data processing speed by constructing a MapReduce library using **C**
- Generalized MapReduce programming model to users by packaging application into a **C** library
- Reduced application runtime significantly by using parallelism to run multiple distributed programming tasks asynchronously

myShell

A new shell written on Linux

- Built a new shell on top of Linux using **C** that can either run interactively or take commands from text file
- Designed a shell capable of running processes either in foreground or background, and handle output redirections

Work Experience

Research Data Analyst | UW Madison | Madison, WI June 2019 - September 2019

- Progressed research efforts by providing valuable insights and results through processing and analyzing public crime data in Madison using **Python**
- Identified locations with higher crime rate by visualizing and animating crime data on the map
- Identified time periods with higher criminal activities by constructing graphs and analyzing them

Junior Developer | UW Madison DoIT | Madison, WI April 2018 - September 2018

- Retained high website availability by performing routine maintenance using **JavaScript**, **PHP** and **GitLab**
- Refactored a scheduling tool, that supports work hours scheduling, with **JavaScript** and **PHP** to improve the stability and reliability of the tool
- Delivered projects in a timely manner by organizing and assigning tasks using the Kanban method through **Trello** and **Slack**