

# Leon Yee Leong Tan

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## EDUCATION

University of Wisconsin - Madison

Graduated: December 2019

B.S. - Double Major in Computer Science and Biology (Overall GPA: 3.48/4.00)

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

## SKILLS

- **Proficient:** Java, Python, C, React.js, Bootstrap, CSS, Javascript, HTML5, Git
- **Exposure:** MySQL, C#, Unity, PHP, R

## PROJECT EXPERIENCE

### MusicPear

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

- Optimized **MySQL** database by designing schemas for user profile and music playlists for data retrieval from user interface.
- Built database connection solution and queries in **Unity** app to facilitate data storage and interaction 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/>

- Implemented a single page web application to display personal information by building and hosting a responsive website using the **Bootstrap** framework in **React.js**, **HTML** and **CSS** for faster development time by utilizing custom components.

### Exon-Intron Predictor

A machine learning program that models pre-mRNA structures

- Implemented supervised learning Hidden Markov Model based on unobservable pre-mRNA state sequences with **Python** that contributes to genomic annotation of microorganism species by accurately predicting the exons-intron locations.

### Map-Reduce

A MapReduce library on C

- Improved data processing speed by constructing a MapReduce library using **C** to asynchronously run parallelizable programming tasks across large datasets.
- Generalized MapReduce programming model by packaging it into a **C** library to make it easier for users to integrate MapReduce into their program.

### 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 a 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 crime hotspots in Madison by visualizing crime data on the map and animating it using matplotlib to show changes across time.
- Constructed line graphs and scatter plots to display common crime patterns in Madison and successfully identified time periods with higher criminal activities

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**.