

# LEON TAN

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Websites: [GitHub](#) | [LinkedIn](#)

## EXPERIENCE

### Data Engineer

APR 2021 - PRESENT

Synthesis Partners, Singapore

- ⌚ Engineered classification tool bar to facilitate market research:
  - Loading of data into Elasticsearch with custom analyser
  - Using FastAPI to create API endpoints to manage Elasticsearch data
- ⌚ Developed pipeline to put machine learning model into production:
  - Using of FastAPI to send data and retrieve model prediction
  - Hosting BERT model with Google Compute Engine to utilise GPU
- ⌚ Developed and maintained new ETL pipelines, reducing data extraction lead time by >60%:
  - Using of FastAPI to create API endpoints
  - Serving a queue system with Celery, RabbitMQ and Redis
  - Using multithreading to accelerate data extraction process
  - Unpacking and validating data before loading into data lake

### Associate Research Officer

NOV 2020 – APR 2021

A\*STAR Bioprocessing Technology Institute (BTI), Singapore

- ⌚ Engineered microfluidic channel simulation of multiphase laminar flow and analysed results to develop novel biomanufacturing technology.

### R&D Process Engineer

AUG 2017 – OCT 2020

Nanofilm Technologies International, Singapore

- ⌚ Employed Python for data analysis of machine learning process records resulting in key process changes that increase coating production efficiency.
- ⌚ Project: Solenoid Magnetic Field Simulation
  - Developed simulation representing magnetic interference between multiple current-carrying wire coils.
  - Fine-tuned with real-life measurements.
  - Initiated patented machine upgrade that reduced power used by 35% through insights gathered.

## SKILLSETS

**LANGUAGES** | Python, Java, C, C++, C#, Bash

**DATABASES** | SQL, NoSQL, PostgreSQL, MongoDB, Elasticsearch

**BIG DATA** | Hadoop, MapReduce, Hive

**AUTOMATION** | Airflow

**CLOUD** | Azure, Amazon Web Service (AWS), Google Cloud Platform (GCP)

**MACHINE LEARNING** | Scikit-learn, TensorFlow, PyTorch

**OTHERS** | Docker, Kubernetes, GitLab-CI, HTML, JavaScript, CSS

## CERTIFICATES

- ❖ M100: MongoDB for SQL Pros | MongoDB
- ❖ Associate Cloud Engineer | Google
- ❖ Developing AI Applications on Azure | Coursera
- ❖ Automate the Boring Stuff with Python Programming | Udemy
- ❖ Getting Started with AWS Machine Learning | Coursera
- ❖ AWS Computer Vision: Getting Started with GluonCV | Coursera
- ❖ Machine Learning for Business Professionals | Coursera
- ❖ Python (Basic) | HackerRank
- ❖ Problem Solving (Basic) | HackerRank

## EDUCATION

Nanyang Technological University

AUG 2013 – JUL 2017

Bachelor of Engineering with Honours (First Class Honours)

Materials Engineering, Specialization in Industrial Material Engineering

CGPA: 4.68 / 5.00

🕒 Awarded College Scholarship.

🕒 Relevant Courses: Computing, Management Decision Tools

## PROJECTS

Kaggle: Rock Paper Scissors Agent

DEC 2020 – FEB 2021

- 🕒 Utilized multi-armed bandit algorithm to select between strategies to compete and outperform opponent's agents and attained top 5% in Kaggle rankings.
- 🕒 Implemented machine learning models, such as Decision Tree Classifier and XGBoost.

Stocks NN Prediction

MAY 2020 – JUN 2020

- 🕒 Designed scraper to extract stock data from Yahoo Finance and predict the best opportunity to buy/sell stocks.
- 🕒 Applied Pandas Datareader to scrape stock data based on stock ticker code provided.
- 🕒 Employed PyTorch to formulate neural network for prediction.