

# Leonardo Irvin Pratama

Phone: (+65) 86987354 · Email: leonardoirvinp@gmail.com

Github: L-Irvin · LinkedIn: linkedin.com/in/leonardo-irvin-pratama · Portfolio: tinyurl.com/portolio-irvin

## EDUCATION

### Nanyang Technological University, Singapore

Aug 2019 – Present

- Bachelor of Engineering in Computer Science with Honours, graduating in May 2023. (CGPA: 4.89/5.00)
- Specialization: Data Science and Artificial Intelligence, Minor: Business
- Dean's List Recipient in Academic Year 2020/2021
- Relevant Modules: [1] Data Structures and Algorithms [2] Introduction to Databases [3] Operating Systems [4] Software Systems Analysis and Design [5] Data Analytics & Mining

### National University of Singapore, Singapore

Jan 2021 – Jun 2021

- Participated in the Singapore Universities Student Exchange Programme (SUSEP).

## WORK EXPERIENCE

### Autodesk · Software Developer – Database Automation Intern

Jan 2022 – Present

- Designed CloudOS pipeline architecture – incorporating AWS services – to deploy Recovery Time Objective tool for DynamoDB using Terraform.
- Incorporated Point-In-Time Recovery feature of DynamoDB to build Recovery Point Objective tool.
- Arranged department-wide welfare event for over 100 members of Platform Services and Emerging Technologies team in Singapore, Phillipines, and India.

### Bonza · Data Engineer Intern

May 2021 – Aug 2021

- Orchestrated BigQuery data pipelines around the concept of direct acyclic graphs (DAGs) in Apache Airflow.
- Commenced Grafana alerting dashboard to monitor anomaly behaviour in AWS and Google Cloud services.
- Constructed Google Cloud Dataproc jobs using PySpark in the Hadoop File Distributed System environment.

### Psion Insights · Software Engineer Intern

May 2020 – Aug 2020

- Developed the foundation of a risk management system platform utilizing MySQL, Express, React.js, and Node.js stack in a web development team of 4.
- Improved chatbot functionalities by creating intents using Amazon Lex.
- Initiated test coverage and documentation on APIs using Mocha.js and Swagger Editor.

## ACADEMIC PROJECTS

### PINTU App: Indonesian NTU Students' Association, IT Committee

Oct 2021 – Present

- Designed database schema to allow school-wide online shopping feature in PostgreSQL using 3NF approach.
- Outlined and implemented CRUD operations along with REST architecture in Django.

### Facial-Recognition-Based Attendance Taking System: Advanced Software Engineering

Aug 2021 – Oct 2021

- Created a touchless attendance taking system using facial recognition in TensorFlow, Django, React.js, and PostgreSQL. Deployed in Google Cloud Platform.
- Led a team of 7 in a scrum environment to maintain a scalable architecture of our scanner system.

### Ground Movement Data-Driven Airport Graph Modification: Undergraduate Research

Aug 2020 – Jun 2021

- Implemented ingesting and analysis stages of air traffic control data streams using PostgreSQL.
- Spearheaded the algorithm development of an accurate automated network graph generator as a core predictive analytic support using Matlab for visualization, with researchers from SAAB-NTU Joint Lab.

### Gamified Teaching Software: Software System Analysis and Design

Jan 2021 – Apr 2021

- Established and tested a gamified teaching software using PostgreSQL, Express, React.js, and Node.js stack.
- Led a team of 9 in an agile working environment to design a software architecture to cater all client's functional requirement needs. Responsible for database maintenance as well as tuning with Pgbench.
- Designed a relational database to provide efficient data fetching and storing from the front-end side.

**Aviation Accident Database: Data Science Analysis**

Feb 2020 – Apr 2020

- Analysed factors affecting aircraft accidents in United States over the past 20 years by classification.
- Harnessed Pandas and Numpy to process raw data and generated a clean data.
- Compared multiple neural network algorithms, such as TensorFlow, Scikit-learn, and XGBoost.

**NTU Makan: Real-time Canteen Information System**

Sep 2019 – Nov 2019

- Coordinated a real-time based application prototype to display available foods around NTU North Spine.
- Dispatched halal-based and price-based filter algorithm with Tkinter in Python.

**Bus Crowd Prediction using Object Recognition**

Oct 2019 – Oct 2019

- Developed a bus crowd prediction prototype by applying object recognition methods on bus footage to detect the number of people trend on a bus daily using Python.
- Implemented various libraries, such as OpenCV for image processing and YOLO for object detection.

**CO-CURRICULAR ACTIVITIES**

---

**Indonesian NTU Students' Association (PINTU), Singapore · Sub Committee (IT)**

Oct 2021 – Present

- Led a junior team of 5 to host a school-wide workshop in HTML and CSS.
- Co-designed backend architecture and database schema of PINTU App.

**NTU School of Computer Science and Engineering · Main Committee (Academics)**

Oct 2019 – Present

- Co-organised academic workshops and providing reliable Past Year Papers solutions.
- Provided technical support for any IT-related initiatives of NTU Computer Science and Engineering Club.

**NTU Students' Union · Sub Committee (Welfare Initiatives Club)**

Sep 2021 – Present

- Organized school-wide events for over 2000 undergraduate students in NTU to improve student welfare.

**NTU Banyan Hall · Sub Committee (Residential Affairs)**

Oct 2021 – Present

- Executed hall dinner and welfare pack distribution events for over 150 residents of NTU Banyan Hall.

**NTU Students' Union · Sub Committee (External Communications)**

Jan 2021 – Jun 2021

- Conceptualized publicity materials for multiple events of NTU Students' Union to accommodate public outreach of over 30,000 NTU students.

**NTU CAC Choir · Main Committee (Publicity and Publications)**

May 2020 – Jun 2021

- Led Publicity and Publications sub-committees on managing NTU CAC Choir's social media accounts – Facebook, Instagram, and YouTube.
- Responsible for public outreach by designing concert photoshoot and publicity materials.

**Indonesian NTU Students' Association (PINTU), Singapore · Sub Committee (IT)**

Jan 2020 – Sep 2020

- Developed PINTU website's front-end using ReactJS component features.
- Created social media content and conducted interviews for Humans of PINTU.

**Welfare Services Club, Regular Service Project – Mental Health · Volunteer**

Sep 2019 – Aug 2020

- Organising events for the Institute of Mental Health service users in a weekly 2-hours session basis.

**SMAKONECUP Genesis 2018 · Main Committee**

Feb 2018 – Oct 2018

- Directed an academic competition for Junior High School students in an annual school cup.
- Liaised with participating schools to ensure a clear communication regarding the event.

**SKILLS**

---

Languages: Bahasa Indonesia (Fluent), English (Fluent), Chinese (Basic)

Programming: C, C++, Python, SQL, Hadoop, Spark, Java, JavaScript, React.js, Node.js, Mocha.js

Other skills: Adobe Illustrator, Adobe Photoshop, Adobe Premiere Pro, Amazon Lex, Microsoft Office, Tableau