# Data Science Fellowship

## Program Guide

Apply now!

VERSION: MARCH 5, 2024

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# Greetings!

Eskwelabs' mission is to drive social mobility in the future of work through data skills education.

The future of technology, data, and machine has already arrived and with COVID-19 speeding up digitalization across industries, it's more important than ever to upskill ourselves so we can meaningfully participate and thrive in that future. Thank you for showing interest in the Eskwelabs Data Science Fellowship. We are excited for you to transform your career and grow with the support of our team, mentors, and most importantly, classmates who will become your friends for life.

**Angela Chen-Delantar**
**Co-Founder and CEO at Eskwelabs**

# WHO IS ESKWELABS? | 2

Eskwelabs is a data science upskilling company with offices in Singapore and Manila. Launched in 2019 with investments from Zalora co-founder Magnus Grimeland, Eskwelabs is the winner of ADB's "Digital Skills for Today's Workforce" challenge.

We work with the region's most forward-looking companies to build up their data teams and provide them with data science talent. With more than 100+ machine learning data scientists trained and 2500+ learners, we specialise in equipping people and teams with cutting-edge data skills.

Who is Eskwelabs?

***Who are the Fellows?***

What is the Data Science Fellowship?

What is the Fellowship Schedule?

What are the Learning Outcomes?

What are the Graduation Requirements?

Am I Ready for the Fellowship?

How do I Apply?

How Much is the Tuition Fee?

Recent Cohorts

# The Fellows

Data Science Fellows apply and are selected into our 15-week part-time bootcamp through a competitive cohort-based process. They are comfortable with quantitative thinking, and have high curiosity and grit. While most Fellows will join the industry post-bootcamp, all are interested in how they can apply their data skills to solving societal challenges.


Cohort 1


Cohort 2


Cohort 3


Cohort 4

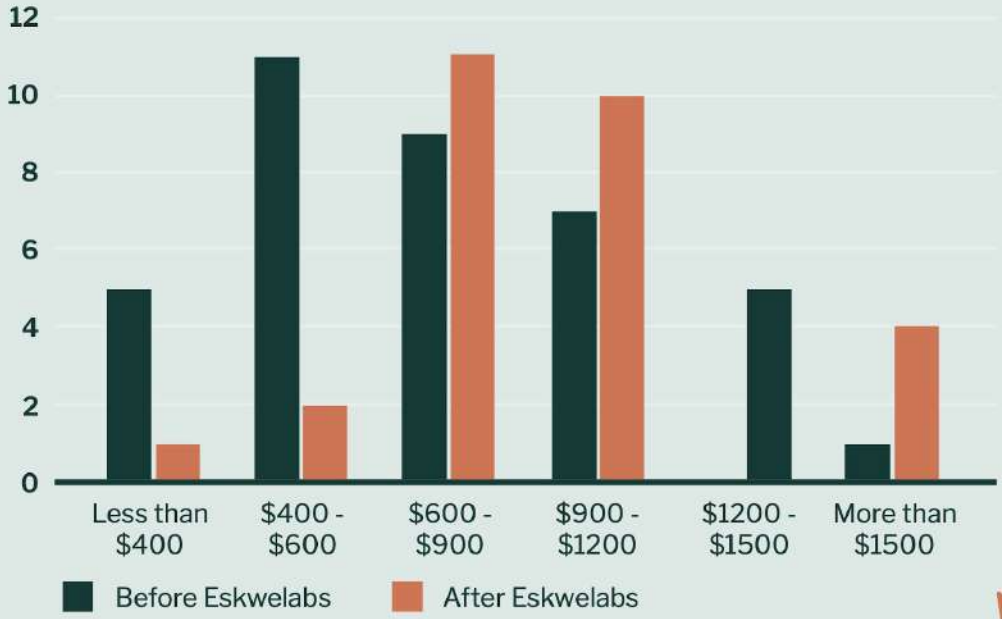

Cohort 5


Cohort 6


Cohort 7

# JOB OUTCOMES FOR FELLOWS | 5

## Monthly Salary (US $)




Fellows who are seeking employment are guaranteed job interviews. From our previous cohort, 90% find placement within 90 days of graduation and increased their salary by 50%.

***Take note that before the bootcamp begins, learners have the option to sign a contract which states that their tuition will be refunded after 9 months if they still don't have a job.***

## *Our graduates work at companies including:*

Shopee · AboitizPower · IHG · kumu · Uploan · UnionBank · pwc · Uber · InterContinental · The World Bank

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The Data Science Fellowship launches the careers of junior data scientists using project-based learning methods.

Over 240 hours of the 15-week part-time online bootcamp, Fellows learn data science with live instructors and mentors.

The program is conducted fully online, with opportunities for Fellows who are in same cities to meet-up for activities.


***Our instructors and mentors are from:***

Google Globe Ayala First Circle ANTLER University of Toronto

# ABOUT THE FELLOWSHIP | 8

## Industry Talks

Attend intimate "meet the leader" sessions with Data Practitioners. Past fireside chats include:

» *Edge Infrastructure Data Scientist, Facebook*

» *Data Scientist Lead, Shopee*

» *Machine Learning Scientist, Google X, the Moonshot Factory*

» *Co-Founder, Montreal AI Ethics Institute*

## Job Interview Guarantee

All graduates are eligible for the interview guarantee. Graduates will have guaranteed **first interviews** with our company partners.

## Industry Access

Share your resume with our network of companies.

***Our network of companies:***

QUADX TaskUs AboitizPower HOME CREDIT pwc

kumu UnionBank OPTUM Shopee DAVI

AXA accenture IBM Lazada SM RETAIL ... and more!

# FELLOWSHIP SCHEDULE | 9

## 20 hours/week of in-class work

Live lectures from **Monday to Friday at 6:00-9:00 PM UTC+8** and every **Saturday at 1:00-6:00 PM UTC+8**

| Mon | Tues | Wed | Thurs | Fri | Sat |
|---|---|---|---|---|---|
| *Week 1 - Sprint 1* | | | | | |
| *Week 2 - Sprint 1* | | | | | |
| *Week 3 - Sprint 2* | | | | | |
| *Week 4 - Sprint 2* | | | | | |
| *Week 5 - Sprint 3* | | | | | |
| *Week 6 - Sprint 3* | | | | | |
| *Week 7 - Sprint 4* | | | | | |
| *Week 8 - Sprint 4* | | | | | |

**Week 9 - 15 Capstone Project-making**

## What are Sprints?

**Data Sprints** - Fellows learn by working in small teams guided by a mentor on data projects, mimicking how tech teams work in the real world using scrum and agile methodologies. Each sprint focuses on 1 industry use case.

Fellows complete 4 sprints at the end of the bootcamp and 1 data science capstone project. They are able to showcase the project outputs in their GitHub portfolios.

## What are Capstone Projects?

Capstone Projects are a rite of passage for Data Science Fellows. Fellows design a full project on their own or in a team. The project can tackle a data for good topic or anything that can leverage machine learning. We also work with industry partners who provide real use cases for Fellows. This will be presented during Demo Day to industry experts and a public audience.


Check out the past capstone projects: https://eskwe.link/DemoDay

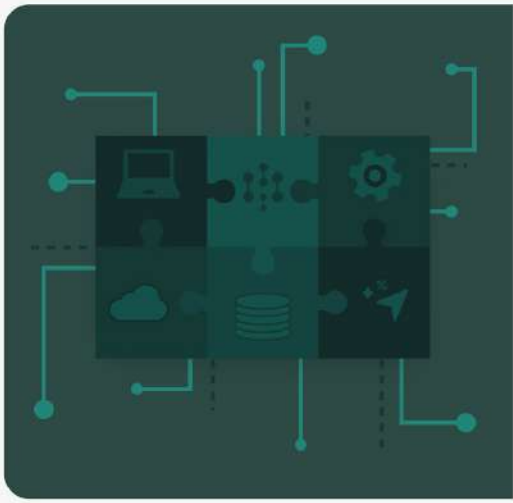
# FELLOWSHIP SCHEDULE | 11

# Sprint 1

**Sprint Topics for Week 1-2**

## Customer Segmentation with Machine Learning

A comprehensive project output encompassing customer analysis, segmentation, and visualization to provide actionable insights for strategic decision-making



**Recommended read**
*Click the image below*

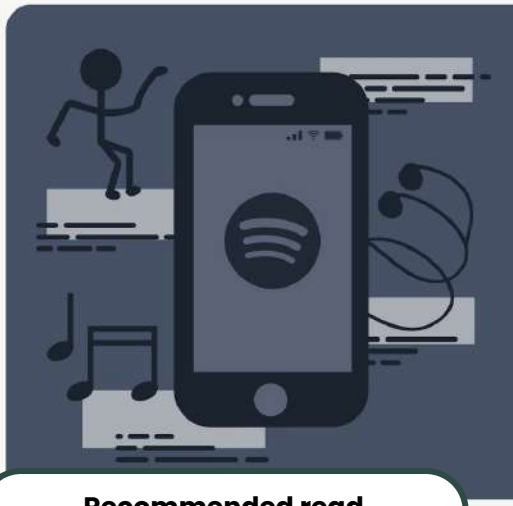
# FELLOWSHIP SCHEDULE | 12

# Sprint 2

**Sprint Topics for Week 3-4**

## Analyzing Credit Fraud with Big Data

A developed anomaly detection system employing machine learning to identify and flag fraud in multiple bank channels/products



**Recommended read**
*Click the image below*

**A Tale of Two Careers: Data Science in the Startup and Corporate Setting**

This blog post shares the insights of two Eskwelabs data science alumni, as they apply their data skills in a startup and a large corporation.

Data Science Fellowship
Industry Apprenticeship

READ MORE →

# FELLOWSHIP SCHEDULE | 13

# Sprint 3

## Sprint Topics for Week 5-6

### Developing a Recommender Engine

A collaborative filtering-based recommendation system using Spotify dataset to suggest songs to users based on their listening history and preferences


**Recommended read**
*Click the image below*


**Soar High Like Our Alumni: The Success Story of our Data Science Fellowship Graduate Mikee Sevilla**

This blog post celebrates how one of our graduates succeeded in overcoming obstacles in transitioning from studying the mind to immersing in data science.

Program Alumni

READ MORE →

# FELLOWSHIP SCHEDULE | 14

# Sprint 4

**Sprint Topics for Week 7-8**

## Generative AI and Data Science

An operational automated workflow generating prompts for improved interaction and output efficiency in AI systems

**Week 9-15 Capstone Project making**

**Recommended read**
*Click the image below*

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# Learning Outcomes

## Topic: Python

» Describe the Data Science Process and how its components interact.

» Use Python to carry out data wrangling and get insights from data sets.

» Be familiar with the Kaggle Environment, it's dataset repository and competition format.

» Code in Python using best practices and scripting standards.

## Topic: Data Visualization

» Create effective visualization of given data (to communicate or persuade).

» Implement both static and dynamic visualizations using Matplotlib, Seaborn, Dash, Plotly, and Bokeh.

## Topic: Core Statistics

» Take a computational approach in Exploratory Data Analysis.

» Review and demonstrate concepts on Summary Statistics.

» Explain in basic terms what Statistical Inference means.

» Identify probability distributions commonly used as foundations for statistical modeling.

» Fit a model to data.

## Topic: Core Mathematics

» Re-learn the math behind the algorithms of machine learning.

» Review and demonstrate concepts on linear algebra and basic calculus.

## Topic: Web Scraping

» Use APIs and other tools like Beautiful Soup to scrape the web and collect data.

## Topic: Big Data

» Acquire and clean their own data, and can move information in and out of relational databases.

» Integrate data from disparate sources, can transform data from one format to another, and can program data management in relational databases.

» Be familiar with the common cloud infrastructures and deploy code using those platforms.

## Topic: Supervised Machine Learning

» Differentiate Supervised and Unsupervised ML.

» Apply basic supervised machine learning algorithms (Linear Regression, Logistic Regression, etc) for predictive modeling.

» Select and implement machine learning techniques that are suitable for the applications under consideration.

» Explore new datasets and implement a comprehensive set of supervised machine learning algorithms from scratch, and master all the components of a predictive model, such as data preprocessing, feature engineering, model selection, performance metrics, and hyperparameter optimization.

» Recognize and implement various ways of selecting suitable model parameters for different machine learning techniques.

» Measure fit and performance of models appropriately.

## Topic: Unsupervised Machine Learning

» Apply basic unsupervised machine learning algorithms (KNN, K-Means, etc) for predictive modeling.

» Select and implement machine learning techniques that are suitable for the applications under consideration.

## Topic: Natural Language Processing

- Be introduced to basic mathematical models and methods used in NLP applications to formulate computational solutions.
- Have working knowledge and hands-on experience in text analytics.
- Generate a word cloud.
- Implement TF-IDF.
- Conduct basic sentiment analysis using relevant libraries in NLTK.
- Reason around ethical and privacy issues in data science conduct and apply ethical practices.

## Capstone Project

- Utilize accumulated knowledge to demonstrate data science in solving a problem, using the tools taught in class and providing data-driven insights and solutions. Fellows have the opportunity to create real-world deliverables.
- Present your project to the data science community at Demo Day.

# Graduation Requirements

In order to graduate and receive the Eskwelabs certificate, you must fulfill the following:

- Complete all 4 sprints and 1 capstone project
- Submit and present sprint outputs
- Miss no more than 10% of live sessions
- Complete end of term feedback form

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# AM I READY FOR THE FELLOWSHIP? | 20

## Fellows Checklist

**Availability:** Live instructions, mentorship, and project-building are the best parts of the Eskwelabs Data Science Fellowship. You need to be available during the said schedule for 15 weeks. The curriculum is demanding and we would like to recommend those with full-time jobs to consider their schedules.

**Intention to Work:** We provide the job interview guarantee for all Fellows. We also offer the **Tuition Refund Policy** for those in the data science program with the condition that you have the intention to work post-graduation. However, company-sponsored Fellows and those who are not seeking immediate employment can still apply, and will opt-out of the **Tuition Refund Policy**.

**Click here to read details about the Tuition Refund Policy.**

**Basic Python Knowledge:** Before joining, you will need to be familiar with basic Python programming. We recommend that you join our free prep course Aral-Aral and participate in our free Learning Circles, which are live tutorials. Please note that this is the basis of the entrance assessment.

**English:** You need to be proficient in spoken and written English (B2 level, at a minimum).

**Collaboration Skills:** You will spend a lot of time working with peers in learning and building to mimic the work environment. We are looking for those who are ready to work in teams.

**Growth Mindset and Grit:** You will receive mentorship and feedback and we are looking for those who have professionalism and the mindset to grow, as well as the grit to grind through the challenges of learning a new skill.

## Materials Checklist

### Internet

You need to have access to a high-speed and stable internet connection.

### Equipment (Recommended)

A computer with the following at minimum: 1.6 GHz processor, 4 GB RAM, 50 GB hard drive, microphone with good audio quality, and webcam with clear image.

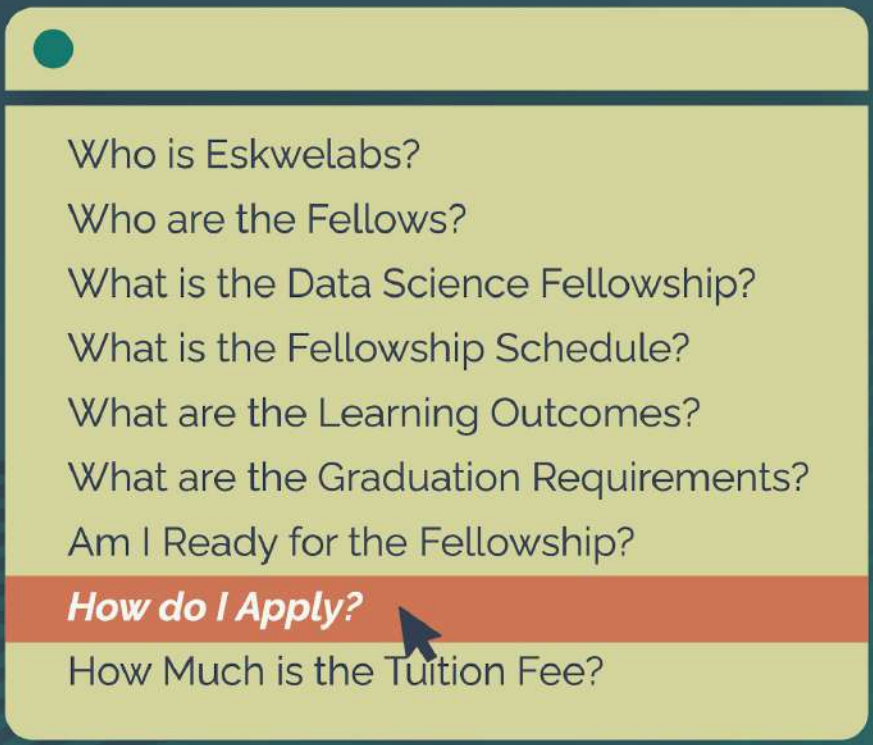
### Applications

You will need to have Jupyter Notebook through Anaconda (Matplotlib, Pandas, SQL, Scikit-learn, and Streamlit), GitHub Desktop (web version should be fine), and Discord (will be used as our communication channel).

ANACONDA

jupyter

GitHub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# Application Process

## Step 1: Sign Up

To kick-off the application process, you first sign up **here**. After that, you will be automatically invited to the free Aral-Aral prep course by email. You need to sign in to our platform to activate your account.

**TIP: On the website, click the "APPLY NOW" button to be direct there.**

## Step 2: Entrance Assessment

You will be brought to the Data Science Fellowship Prep course where you will complete an assessment exam. This exam helps us understand your current skill levels and is meant to set a baseline for your starting point.

## Step 3: Admissions Interview

The final step of the application process is having a conversation with a member of our team to get to know your career goals better and understand how we can support you through the Fellowship. References may also be asked to be provided after the interview.

## Step 4: Acceptance Update

Our team will review your entire application and inform you of your status in 2-3 weeks. We will assist you in choosing tuition options.

# HOW MUCH IS THE TUITION FEE? | 24

## Method 1 - Bank transfer/deposit/Gcash

*12% vat is included below*

**You can check the updated tuition fee prices any time there are changes, in our blog post here!**


Video: https://youtu.be/uu7STaJgiww

### OPTION A

UPFRONT EARLY BIRD PAYMENT

### OPTION B

UPFRONT ONE-TIME PAYMENT

### OPTION C

INSTALLMENT PAYMENT

### OPTION D

STUDY-NOW, PAY-LATER

# HOW MUCH IS THE TUITION FEE? | 25

## Method 2 - Credit or Debit Card

*3.5% transaction fee included below*

**You can check the updated tuition fee prices any time there are changes, in our blog post here!**


Video: https://youtu.be/uu7STaJgiww

### OPTION A

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### OPTION B

UPFRONT ONE-TIME PAYMENT

### OPTION C

INSTALLMENT PAYMENT

### OPTION D

STUDY-NOW, PAY-LATER

# HOW MUCH IS THE TUITION FEE? | 26

## Scholarship Application

After signing up, you must complete the entrance assessment, submit a scholarship application essay, and attend the fit interview. The team will evaluate your scholarship application and then you will be invited for another interview with our Education Team.

## The Aral-Aral Scholarship

This scholarship covers the full course fees and is awarded on the basis of merit and need. Aside from financial support, the scholar will have access to the Eskwelabs Data Science Fellowship community and will be given leadership development opportunities to mentor others through the Aral-Aral online community.

A good candidate must achieve a high score in the entrance exam, complete aral-aral practice sets, and participate in the learning circles. The candidate should also be willing to coach and mentor others and have community building experience. Lastly, the candidate should be in a position where the cost of the program is a significant financial burden.

## The Data for Good Scholarship

This scholarship covers full course fees of any learner who is dedicated to work with a social purpose, who has pursued an impact career, or who wishes to improve their knowledge of data-driven decision making. In addition, the scholarship also provides access to the Eskwelabs Data Science Fellowship community and exclusive opportunities to work on data science for good projects with Eskwelabs partners.

A good candidate have taken action to make a positive social impact and also have spent preferably at least 2 years driving change. The candidate should be able to demonstrate why a data science education is essential in helping you develop your work/impact at this stage. Lastly, the candidate should be in a position where the cost of the program is a significant financial burden.

For more details, check out this blog post: https://eskwe.link/DSFScholarship

# Ready to Apply?

**Click here to book a free 15 minute 1-on-1 with an admissions advisor**

For general inquiries send us a message at:

admissions@eskwelabs.com

Having trouble signing up?
Let us know how we can assist you:

https://eskwe.link//AdmissionsAssistance