FULL STACK NANODEGREE

Lecture 1

By: Ajiroghene Sunday

TABLE OF CONTENT

01

INTRODUCTION

Introduction

What a great privilege to connect with great minds like you. The fact that you are here means you are passionate about creating tomorrow's technology. We'll get to know each, explore what we shall be doing for the next two months +, understand the value of this learning journey and lay some basic foundations and guidelines that will help us have productive and engaging sessions. Then we will discuss build tools and Their benefits briefly.

“Learning never exhausts the mind.”
– *Leonardo Da Vinci*

“For the things we have to learn before we can do them, we learn by doing them.”
– *Aristotle*

“Learning is not attained by chance, it must ne sought for with ardor and attended to with diligence.”
– *Abigail Adams*

“The beautiful thing about learning is that nobody can take it away from you.”
– *B.B King*

About Me

AJIROGHENE Sunday

I am a tech enthusiast, software developer, IoT/Embedded system developer, a goal oriented personality and a lover of God.

Introductions “in 30 seconds”

What’s Your Name?

Let's get to know each other.

What’s Your Background?

Your college major and your current role.

Why Did You Join This Program

What do you aim to gain by the end of the sessions.

Interesting fact about you

Something not many people know!

02

THE JOURNEY

CONGRATULATIONS, YOU MADE IT!

- Congratulations on earning this scholarship for the full stack development Nanodegree program.
- You are now officially “Udacians” and part of the exclusive group of Udacity students and graduates.
- Each one of you was carefully selected from a long list of applicants.
- It means that each one of you possesses the qualifications to become a professional frontend developer.
- You should feel proud of this achievement, we are looking forward to seeing what you will do next.

THE VALUE OF A NANODEGREE

- The cost of a Nanodegree ranges around $1200-$3000 depending on the duration with additional fees for the connect program.
- Nanodegree Programs are industry-recognized credential designed for students to advance their skills or get new jobs.
- Nanodegree Programs are curated to provide a hands-on learning experience of upcoming and current computer technologies
- Nanodegree Programs are built in-collaboration with, and valued by, industry leaders like Google, Facebook, GitHub, and more.
- While a free course is a good start to gaining basic knowledge on a particular topic, this level is taken up several notches with the renowned Nanodegree Programs.


SLACK
Your Support Hub

WHY JOIN SLACK?

Our Slack community is an awesome place to get your questions answered, connect with fellow students, stay informed of community updates and more!
We will have several activities and initiatives planned that will be held on Slack.
So please take a minute now to join our amazing support community.

Join Now

HOW TO EFFICIENTLY USE SLACK

Use the right channel!

General

Questions regarding the scholarship

Web

Technical questions and problems

Keep your technical questions public!

Sessions leads are available on slack for a limited amount of time and on specific days.

Please post your technical questions publicly to guarantee a quick response.

You can still private message us if you need encouragement or help!

03

Guidelines

SESSION FORMAT

First Segment

The first 10 minutes will involve general discussions followed by a 10 minutes revision and quizzes for the previous session

Second Segment

The following 80 minutes will be comprised of 70 minutes explanation and questionnaire and a 10 minutes break

Last Segment

The last 20 minutes will involve remaining discussions and student activities. Guest speakers might show up too!

SESSION GUIDELINES

TIME

Session starts at 12.0PM
Please join on time.

PREPARATION

Let's be well prepared for the session.

QUESTIONS

In case of any questions, raise your hand

BE FORWARD

Ask as much as you want and need! Don't hold back.

REVOCATION CRITERIA

1	2	3
Absence	**Plagiarism**	**Lateness**
Maximum absence is 2 sessions.	Please don't copy other people's work!	Deliver your finished projects in time.

PRO TIP

- ✓ Make sure your name on Zoom matches the one in your classroom for purpose of taking attendance.
- ✓ Use documentation to learn.
- ✓ You are allowed to look at existing code and solutions but develop your own implementation.

FRIENDLY TIP

Please make sure your name on Zoom matches the one in your classroom.

Hossam Ibrahim  Hossam Abubakr

HOW NOT TO PLAGIARIZE BY MISTAKE!

Looking at existing code to get a general idea but making your own implementation 

Copying an existing code and changing the variable names. 

Using documentation to learn how to use a service. 

Copying a StackOverflow Answer and using it as is in the project. 

MANAGE YOUR TIME WISELY

There's a lot of content to learn in this Nanodegree within a limit amount of time.
You have to manage your time wisely!
If you feel lost or feel like you can't manage your time wisely.
Please use the following study plan to efficiently manage your time.
Study Plan

Exploring what lies ahead

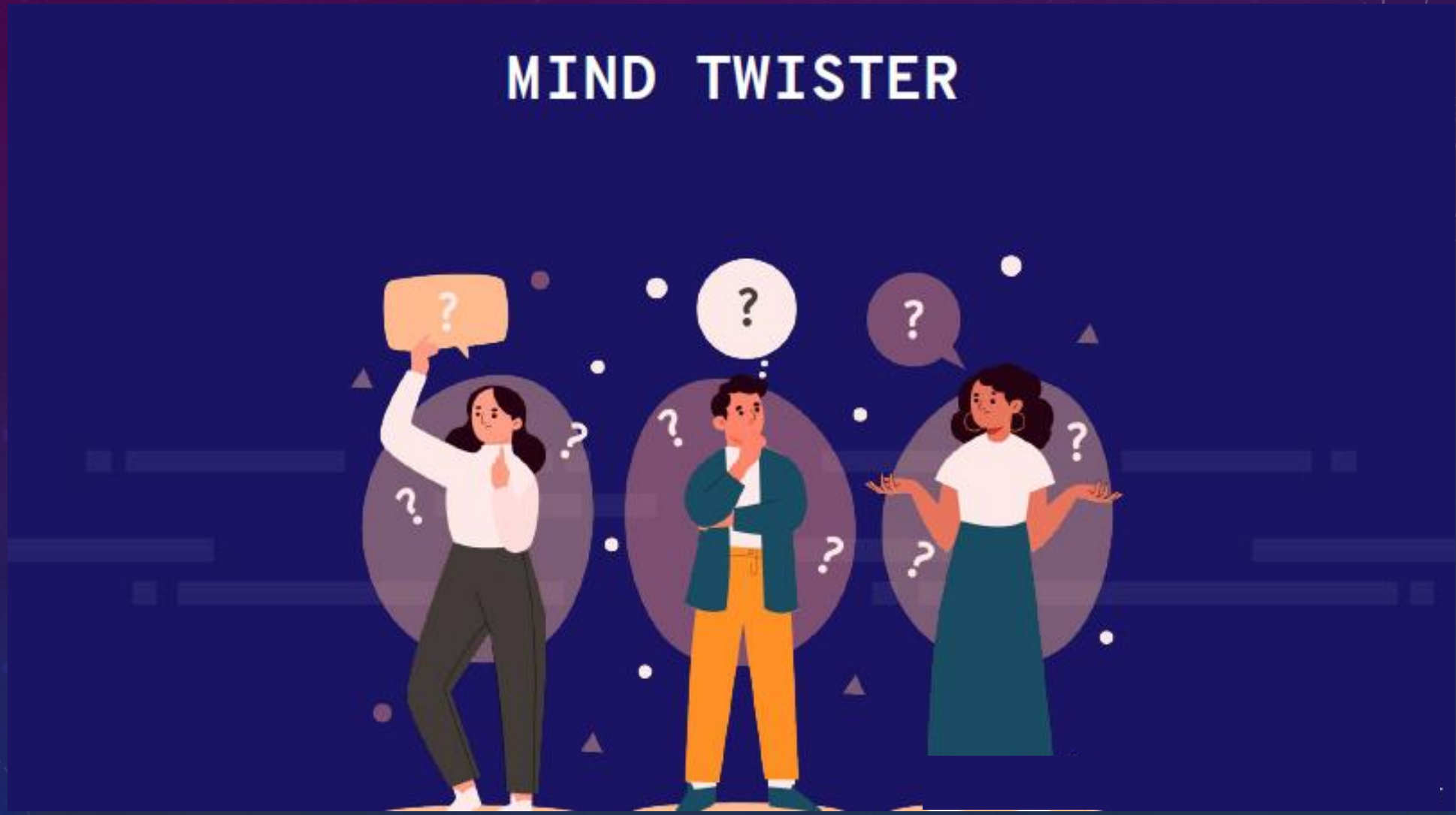
SESSION ACTIVITIES

- THINK TANK
- RAPID FIRE
- MIND TWISTER
- MIND REWIND
- TOPIC REFRESHER
- RESEARCH COLLAB
- THE ESSENTIALS

THINK TANK

RAPID FIRE

MIND TWISTER




MIND REWIND


TOPIC REFRESHER
Q&A


RESEARCH COLLAB

ESSENTIAL KNOWLEDGE

At the start of every new topic we might take a step back and discuss some essential knowledge that you will need, in details.
The topics will range from basic, to technically advanced.

Python Essentials

We will discuss some Python essentials that will serve as a basis for our work going further.

Advanced Python

We will discuss some advanced Python topics which will go Into building some cool apps

PostgreSQL Essentials

We will discuss the essentials of SQL and PostgreSQL which will help you ace the upcoming projects.

TOPIC ARRANGEMENT

Our sessions will cover the following topics:
Backend Development, API Creation and AWS.
Thus giving us 3 sessions for each topic, our sessions will be arranged in the following format.

1

Theoretical

We will discuss the reason behind the existence of this technology and what it tries to solve.

2

Practical

We will practically use this technology live and explain the technical facets of its implementation.

3

Admission

We will discuss any remaining topics then discuss the project in details with a live demo.

I AM NOT ALL KNOWING
AND THAT'S A GOOD THING!
WE ARE LEARNING, TOGETHER!


THE SESSION IS NOT A
REPLACEMENT FOR THE CLASSROOM
YOU STILL HAVE TO STUDY, WE ARE HERE
TO REVISE AND EXPAND OUR KNOWLEDGE!

WE ARE A TEAM

Don't think of our sessions as a normal classroom. While we have to follow some guidelines, they are there to organize our work. This is a team effort. Learning can be fun and it will be with your participation and engagement. We are all here to learn and have fun doing it, don't be stressed and ask all the questions you want.

04

What's Ahead

KNOWING FULL STACK NANODEGREE ROADMAP

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TECHNICAL MILESTONES

1. SQL and Data Modeling for the Web

PROJECT	PREREQUISITES	WHAT PROFICIENCY WILL YOU GAIN
Fyyur: Artist Booking Site	• Basic Programming in Python • Front-end web development (HTML, CSS, Javascript) • Terminal Command Basics • SQL and Relational Databases	• Python 3 • Flask • PostgresSQL • psycopg2 • SQLAlchemy • Flask-SQLAlchemy • ...

TECHNICAL MILESTONES

2. API Development and Documentation

PROJECT	PREREQUISITES	WHAT PROFICIENCY WILL YOU GAIN
Trivia API	• HTML and CSS • HTTP Requests and Routes • Python or Javascript Programming: Writing functions, logic, control flow • Using the Terminal • Version control in Git and using GitHub • Relational databases and SQL • Postgres SQL • Object-Relational Mappers with SQLAlchemy	• API Development • API Testing • API Documentation • TDD • ...

TECHNICAL MILESTONES

3. Identity Access Management

PROJECT	PREREQUISITES	WHAT PROFICIENCY WILL YOU GAIN
Coffee Shop Full Stack	• Basic frontend or backend implementation (e.g. Javascript/HTML/Python/Flask) • Network communication (i.e., HTTP) • Structured Query Language (SQL) using SQLAlchemy • API Development (REST)	• Identity and Authentication. • Password authentication design patterns • Access and Authorization • ...

TECHNICAL MILESTONES

4. Server Deployment and Containerization

PROJECT	PREREQUISITES	WHAT PROFICIENCY WILL YOU GAIN
Deploy Your Flask App to Kubernetes Using EKS	• HTML and CSS • HTTP Requests and Routes • RESTful APIs • Identity and Access Management • Python or Javascript Programming: Writing functions, logic, control flow • Using the Terminal • Version control in Git and using GitHub • Relational databases and SQL • Postgres SQL • Object-Relational Mappers with SQLAlchemy	• Containers (*development, deployment ,and testing*). • Docker • Kubernetes • AWS cli • ...

Q/A

Ask a question

Any feedback

Thank you