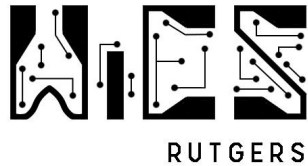# About Me

Rithika Korrapolu
Senior
CS & Business

Previous Experience:
SWE@Google
PM@AMC Networks
PM@Microsoft

Let's Get Started

Program Goals

Allow students to work in teams to **build out their own feature/product** as if they were in a startup / in the tech industry

Teams will be comprised of a **product manager**, a **data scientist**, a **product designer**, and a **software engineer**

Definition of Roles

What is a Product Manager?

- Mini "CEO" of the project
- Sits at the intersection of data, design, and engineering
- Setting the product vision and strategy
- Ideation and prioritization of features

WOULD I RATHER BE FEARED OR LOVED? EASY
BOTH. I WANT PEOPLE TO BE AFRAID OF HOW MUCH THEY LOVE ME

What is a Data Scientist?

- Collects large amounts of unruly data and transforming it into a more usable format.
- Solves business-related problems using **data-driven techniques like machine learning**
- Works with a **variety of programming languages,** including SAS, R and Python.

About Me :)

Raina Gupta
Junior
CS & Art
Roger Federer's
#1 Fan
SWE&Design
@Fidelity

What does it mean to be a Product Designer?

- Create the best user experience based on feature requirements
- Define interaction models, user task flows, and UI specifications.
- Develop and maintain design wireframes, mockups, and specifications as needed.

About Me

Madhu Sivaraj
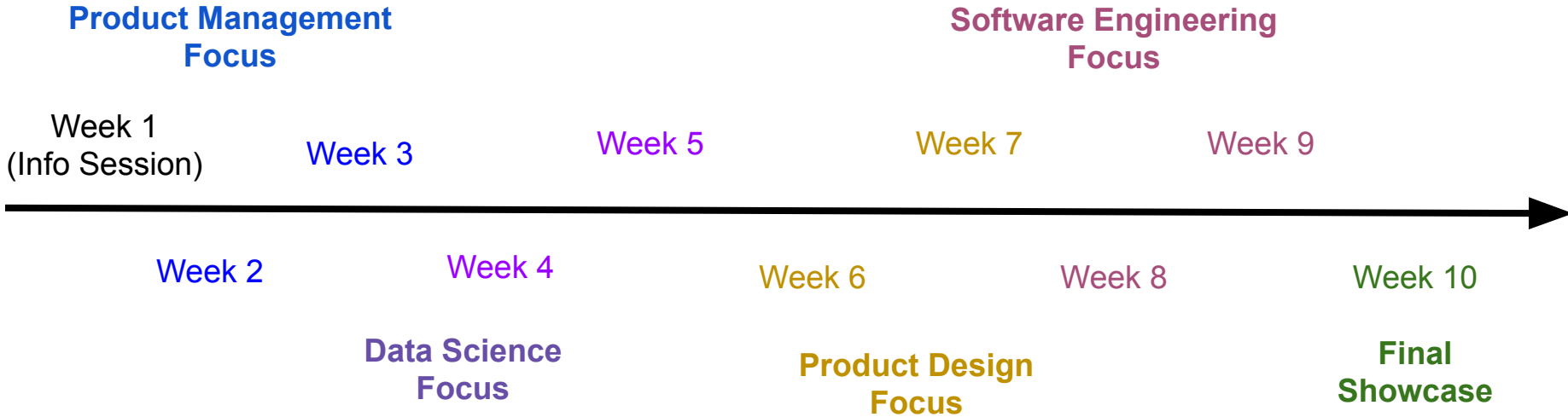Junior
Computer Science
SWE&Visa

What is a Software Engineer?

- Responsible for **creating, designing, developing and implementing the software solutions** and the code that makes a program run
- Needs to be able to **communicate at both a very in-depth, detailed level** with computer programmers **as well as a broader "big picture" level** with IT managers and upper management.

Program Details

Program Timeline

Product Management Focus

Software Engineering Focus

Week 1
(Info Session)

Week 3

Week 5

Week 7

Week 9

Week 2

Week 4

Week 6

Week 8

Week 10

Data Science Focus

Product Design Focus

Final Showcase

Overall Weekly Objectives

Week 1: Feature Ideation & Problem Scoping (All)
Week 2 & 3: Customer Insights & Defining
Feature (PM)
Week 4 & 5: Hypothesis & Data Analytics (DS)
Week 6 & 7: Design & Mocks (UI/UX)
Week 8 & 9: Prototype (SWE)
Week 10: Final Showcase (All)

Product Manager Objectives

- Interview and survey users
- Scope the main personas & their use cases/pain points
- Form a hypothesis and validate with data scientist
- Define and prioritize requirements (MVP & Future)
- Work with Designer to design the user experience
- Work with Software Engineer to help code a working prototype
- Create a PM Spec and final presentation (documentation)

Data Scientist Objectives

- Work with the product manager to create a hypothesis that can be validated with data
- Evaluate large amounts of customer data using SQL, R or etc to extract meaningful statistics to validate hypothesis
- Present data findings using a data visualization tool like PowerBi, Tableau, or etc

Product Design Objectives

- Work with product manager to understand the feature requirements and how to best visualize them from a user experience perspective
- Create low fidelity wireframes and review with internal stakeholders
- Start finalizing high fidelity UI/UX Mocks using Sketch, Photoshop, Adobe XD or etc
- Work with real users to conduct usability testing/user research throughout this process

Software Engineering Objectives

- Work with the product manager and designer to understand the best product platform for the feature
- Research and choose the optimal programing language for the feature and residing platform
- Continuously work with designer to start coding out the design mocks
- Finalize a working proof of concept/ prototype for the showcase

Prompt for Fall 2019

Your startup is hired by Rutgers University to help introduce or improve existing technology that improves the RU student experience.

Potential Project Ideas Part 1

- Help students find clubs/ongoing events better
- Improve the Rutgers bus system (maybe adding a check-in process at the bus stop)
- Improve the orientation/onboarding process for incoming RU students
- Help students find their campus/classrooms better

Potential Project Ideas Part 2

- Redesign the course enrollment process
- Improve the course finding process (integrate RateMyProfessor into the course catalog)
- Improve the way to do in class attendance/participation

Due By Next Week

- Fill out application
    - Who is on your team → responsibilities
    - Problem that you are tackling

Outreach Project Track

About Us

Amulya Mummaneni - Tech Director

Sam Olagun - Deputy Tech Director

Ethan Febinger - Project lead (DocumentedNY)

Reed Krawiec - Project lead (citizenship.io)

Program Overview

1. **Self guided projects**
   a. Individual projects meant to teach a specific area in detail
   b. Engineers will go on to work on this area of one of the outreach projects
   c. 3 topics
      i. Backend (Flask microframework)
      ii. Frontend (ReactJS)
      iii. Data science (SQL)
2. **Outreach projects**
   a. Team projects in collaboration with outside organization
   b. Each engineer receives an assignment in the area of the self guided project they completed
   c. Assigned to a team after application process
   d. 2 projects
      i. Unsealing the Immigration Courts (USACS x DocumentedNY)
      ii. Citizenship.io (USACS x Enactus)

Self Guided Projects

Objectives

Expand technical skills via a rigorous curriculum

Use these skills to build a real product

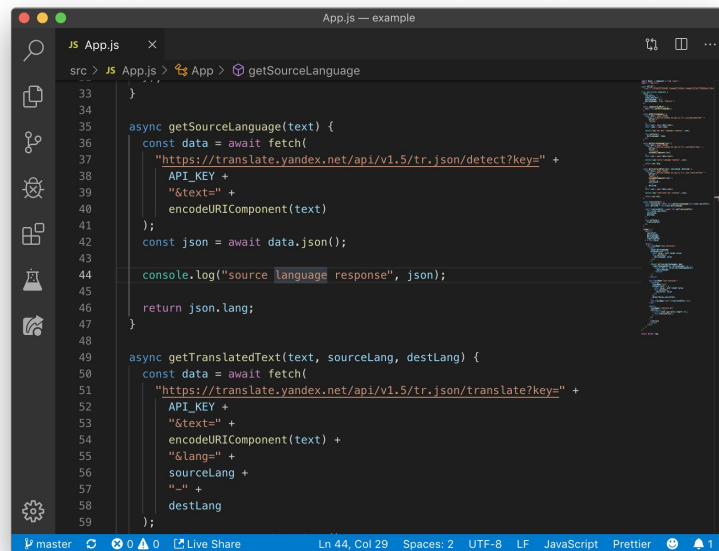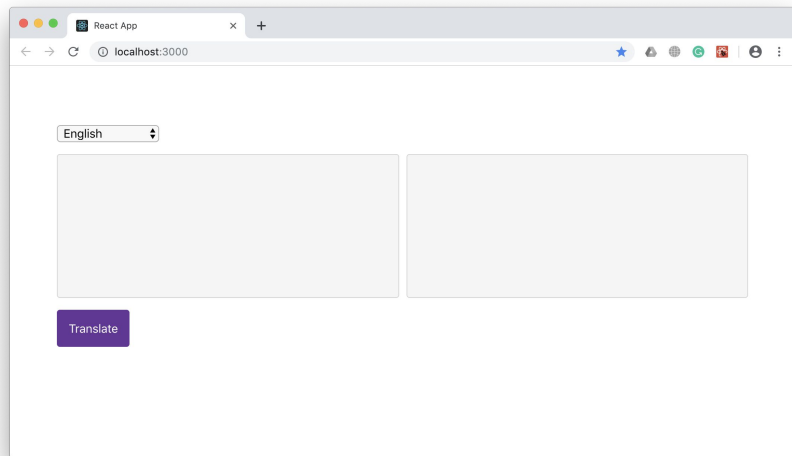# Backend - Python Flask

URL Shortener!

www.rutgers.edu/ → www.urlshortener.com/1jhg32

Skills acquired: Python, Flask, Hashing, SQL

Frontend - <u>React</u>

Translator App

Skills acquired: React, JavaScript, HTML, CSS

Data Science - SQL

```sql
select image, title, metadata from "images" where 1;
```

Skills acquired: SQL

Outreach Projects

Objectives

Build a real solution to an issue

Work in a team environment towards a meaningful end goal

Unsealing the Immigration Courts

Partner organization: DocumentedNY

   Non-profit news site devoted solely to covering New York City's immigrants and the policies that affect their lives

   Provide New Yorkers with original reporting about policy changes and their effects

Project overview: Clean and structure 14 years worth of immigration court data and build a tool that will download the data each month and organize it in the structured format.

Skills required: React, Flask, SQL - Data science focus

citizenship.io

Partner organization: Rutgers Enactus

    Rutgers chapter of an international nonprofit dedicated to using entrepreneurial ventures to improve society

Project overview: Website to help prospective US citizens study for the US naturalization test

Skills required: React, Flask - Web development focus

Timeline

9/12 - 10/17: Self guided projects

10/10 - 10/24: Applications for outreach projects open

10/31 - 12/5: Outreach projects