# VATSAL RUSTAGI

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## Coursework

Data Structure Implementation and Analysis (C++)

Intermediate programming (Python)

Intermediate programming (Java)

Introduction to Data Management (SQL)

Introduction to software engineering (git)

Principles in System Design (C)

Discrete Mathematics for C.S.

Applications of Probability in C.S. (Matlab)

Introduction to Artificial Intelligence

Design and Analysis of Algorithms

Human Computer Interaction

## Skills

### Programming Languages

C++

Swift

Python

Java

JavaScript

### Frontend

iOS

HTML

CSS

Bootstrap

### Backend

SQL

Node.JS

MongoDB

Cheerio (JS)

Beautiful Soup (Python)

### Other Skills

NoSQL

Tableau

MS Office

Matlab

R

Git

Fluent in English, Hindi

CocoaPods

Heroku

C

C#

## Education

### University Of California, Irvine
B.S. Computer Science 2018
- GPA: 3.947 / 4.0
- Dean's Honor List: Winter 2016 - Spring 2017

## Employment

**TourUp**                                          May 2017 to Current
**Lead iOS Developer**                                          Irvine
- Lead iOS Developer and UI/UX designer at the startup. Created UI mockups for the iOS application using Sketch app based on iOS design patterns and developed the iOS application from scratch in Swift 3 and Objective-C.
- Integrated various APIs (Google Maps, Stripe, Sinch, FBLoginSDK, GoogleLogin etc.) for functionality and pods (WSTagsField, JSSAlertView, SwiftyStarRatingView, Alamofire, SwiftyJSON) for UI and utility purposes in the application.
- Other elements that I worked with: Delegates, UICollectionView, UITableView, UIPageViewControllers, UIScrollView, MKMapView, UISegmentedControl, UINavigationController, UIStackViews etc.
- Worked with team members to come up with design ideas and implemented them in the application. Identified the strengths and weaknesses of the team members and delegated the appropriate jobs to them to carry out the task.

**Dreams for Schools**          Sep 2016 to Dec 2016, Apr 2017 to Jun 2017
**Mentor at AppJam+**                                      Garden Grove
- Worked with middle school students to build a STEM based Android application - "Eruption".
- App was created using AppInventer (by MIT) a Java based online IDE.
- The app won the fan favorite award in the final showcase among 18 other teams.

## Projects

**Course Plan**                                                Sep 2017
- An iOS application that tells college students the courses they can take based on the courses they have already taken.
- Developed the backend with Node.JS and the frontend with iOS.
- Web-scrapped UC Irvine's course listings webpage with Cheerio library in JavaScript to get the most up-to-date course listings.
- Applied Kahn's algorithm to topologically sort the courses and display the resulting courses.

**Dark Notes Chrome Extension**                                Sep 2017
- Built a Chrome extension using Javascript, HTML, CSS and Chrome tools to switch on dark mode for online lecture notes.
- The purpose of the extension is to make it easier for students to read online lecture notes which leads to better quality of sleep.

**What's In My Fridge**                                        Aug 2017
- Developed an iOS application to keep track of the items in the fridge and keep them from expiring.
- Integrated CoreData to save data on the device. Implemented various cocoapods to improve the UI.
- Used the NSFetchedResultsController to coordinate data between UITableView and the database.

**Rent Splitter**                                              Aug 2017
- Developed a rent calculator iOS Application that helps to split rent among roommates. The app lets the user choose an Irvine company UTC apartment for easier user experience.
- Implemented with an MVC model and various iOS elements like UICollectionView, UIPickerView, UITableView etc. Moreover, wrote custom UI classes to modify UITextFields and UILabels and implemented a material color palette.

## Activities

**Association for Computing Machinery at UC Irvine**    Apr 2017 to Current
**Member**
- Solved various programming problems and improved our understanding of data structures and algorithms. Learned new and more efficient ways to solve the same problem.
- Sources of problems: HackerRank, Google Code Jam, CodeChef etc.

**Artificial Intelligence at UC Irvine**              Sep 2017 to Current
**Member**
- Solve problems on Kaggle.com and discuss among the peers to improve our understanding of Machine Learning based problems.

**Management Information Student Society at UC Irvine**  Sep 2017 to Current
**Mentor**
- Help UC Irvine students, younger than me, with various college and course related activities through my experience and learnings from my years spent at UC Irvine.