Roshaan Siddiqui

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Contact Info

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Education

Wesleyan University, Middletown, CT **| Class of 2022**

B.A. | Major: Computer Science **| GPA: 3.47**

Relevant Courses

Computational Media: Video Game Development
Vectors & Matrices
Discrete Mathematics
Data Structures and Algorithms (Fall 2020)

Skills

Languages: Python, JavaScript/TypeScript, C#, HTML/CSS, SML, Swift, SQL

Frameworks/Libraries: Ionic, Angular, TensorFlow, Hugo, Numpy, Pandas, Matplotlib

Tools: Unity3D, Xcode, Bash, Jupyter Notebook

Database: postgresSQL, Postman, mySQL, Firebase

Experiences

Quantitative Analysis Center — Middletown, CT

Audio Visual ML Teaching Apprentice — **August 2020 – Present**

- Held supplementary sessions for students to practice machine learning techniques on audio and image data
- Planned and taught two in-person lectures about machine learning topics to students taking the course

Wesleyan's Delta Lab — Middletown, CT

Software Developer & Data Analyst — **October 2019 – Present**

- Developed an intuitive video annotation web tool to crowdsource crucial training data from over 5,000 students
- Designed and developed a full-stack web application tool to intuitively explore live Facebook ad spending data

IDEAS Makerspace — Middletown, CT

Studio Assistant — **September 2019 – Present**

- Helped students with coursework specific tasks that utilize microprocessors, Matlab, and 3D modeling software
- Held workshops to teach students about laser cutters, 3D printers, and other power tools in the studio

MassVr — Chicago, IL

Software Engineering Intern — **June 2019 – August 2019**

- Collaborated with two software engineers to design and develop a scalable waiver authentication backend system
- Optimized Scala and JavaScript code in the main codebase and assisted in beta testing new VR maps

FIRST Robotics — Chicago, IL

Lead Programmer & Captain — **June 2012 – April 2018**

- Created robust autonomous programs that advanced the team to the World Championship in 2017

Leadership

YouthHack Connecticut — Middletown, CT

Vice President of Operations — **September 2018 – Present**

- Piloted a program for high school students to host entrepreneurial workshops and events at Wesleyan University
- Led coding and app design workshops for 70+ Connecticut high school students

Projects

EnergySkate (Unity3D, C#) Live View — **January 2020 – April 2020**

- Managed a team of four students to create a cross-platform game to teach kids about kinetic & potential energy
- Cultivated valuable skills in project management like project life cycle methodologies and utilizing Gannt charts

Facebook Ad Spending Visualization (Angular, HTML/CSS, TypeScript) Live View — **March 2020 – July 2020**

- Developed a visualization timeline tool to explore Facebook ad spending of presidential candidates across the US

Video Annotation Tool (Angular, HTML/CSS, TypeScript) Live View — **October 2019 – February 2020**

- Streamlined research lab's data-collection process by developing a web app tool used by hundreds of students

WesEvents (Ionic, HTML/CSS, TypeScript, Firebase) Live View — **Summer 2019**

- Independently developed a cross-platform solution for Wesleyan students to stay up-to-date with campus events
- Held numerous focus groups sessions to gather feedback on UI/UX

Interests: Travelling, Biking, Audio Books, Psychology, Digital Art

Programming Concepts: Model View Controller, Relational Databases, Object-Oriented-Design, Distributed Systems, Agile,

Accomplishments: FIRST Robotics Deans List Award, McNair Scholar, Questbridge Finalist,

Additional Languages: Urdu/Hindi, Arabic (limited proficiency)

Extracurriculars: Muslim Student Association, YouthHack Connecticut, Teacher Assistant for

Missleanous Adobe Suite, Arduino Uno, Webflow,

Minor Waiver Signer (Ionic framework, Slick Framework - Scala, postgresSQL) Summer 2019

- Coded a portable application for minors at MassVR locations to get their waivers signed remotely

Come Thru – Invite Your Family*,* iOS Application (Firebase, Xcode, Swift 3, cocoaPods) July 2018

- Learned Model View Controller (MVC) architecture by creating an invitation app for iOS
- App received over 5000 downloads upon shipping it to the iOS App Store

First Robotics

- Received the prestigious Dean's List Award for exposing 300+ students to STEM

Delta Lab

- Leveraged Google Cloud Platform to deploy and maintain a repository of various data visualization tools for the public

- Managed an independent project to categorize and annotate a large database of videos by applying an audio fingerprinting algorithm to detect advertisement transitions

Chicago Math & Science Academy, Chicago, IL June 2018

Diploma, GPA 3.93; Rank: 2/89

How were you first introduced to Computer Science? How have you continued to develop your technical skills and seek additional exposure to the field?

I was first introduced to Computer Science in my middle school robotics club. I was excited to learn about mechanical engineering while strengthening my creative thinking skills, but as I dove into computer science I quickly grew to love the challenge of it. While leading my highschool's robotics team, I became interested in mobile app development. I created some basic apps on my own by following Youtube tutorials but I was hindered by my limited experience. My junior year of high school, I learned about a summer iOS coding Bootcamp and I fundraised enough money to attend. This was a profound experience that grew my love for the material and made me want to continue to develop my skills. I got the chance to interact with professional coders who taught me to code iOS apps using Swift. More than anything, I learned how important it is for a programmer to be independent and resourceful. Throughout my senior year, I continued to hone my skills by taking courses on Lynda.com and Coursera, building small apps from scratch (like "Invite Your Family", an app to help families plan social gatherings), tutoring my friends in front-end web design, mentoring the other members of my robotics club and participating in Google CSSI.

What is your strongest programming language? How much experience do you have using the language? Go into detail about how you used this technical language. If talking about a group project, be specific about your role in the final product. (Examples can include projects, coursework, competitions, websites, previous internships, etc.)

Javascript & Python are my strongest programming languages. I used Python during my high school programming course as well as my Computer Science course in my freshman year of college & I am currently using it in my machine learning course. Besides coursework projects, I have not had the opportunity to do a lot on my own with Python. I have had a lot of experience working on personal projects with JavaScript though. I am very familiar with the Angular & Ionic Framework and have used both of these to create a number of different projects. For example; I utilized the Ionic framework during my internship last summer at MassVR to build a remote waiver signing tool for the facility as well as led the initial development of a calendar booking web app that is currently used in production. Additionally, during the summer I worked day and night to create a feature-rich event social platform mobile app and website for my university to make it easier for students to know of campus events. Additionally, I have extensive experience in C++ for use with Arduino and have created a number of DIY/coursework projects utilizing it.

At Google, we believe that a diversity of perspectives, ideas, and cultures leads to the creation of better products and services. Tell us about your background and experiences and how they make you unique.

I was born here in the United States where I lived until the age of 6 then moved to Pakistan where I lived for an additional 5 years before returning back to America. Most of my childhood memories that I internalized are from my time in Pakistan and had a huge effect on my understanding of the world. For one, I grew up very aware of the fact that while my friends and I in the US had a very secure future, there were kids in the world who had to continuously deal with the struggle to put food on theirs and their family's table. Even then, these kids made the best out of their lives with what little they have by striving to excel in academics. Even with all their efforts in trying to craft a better life for themselves, they end up living in broken brick homes, getting dragged into committing crimes out of necessity and wasting their incredible capacity for intellect to go work a job that breaks their backs. I really believe that children are the backbone of our society and the only way we can bring change to this world, so as I work to become a software engineer, I want to explore how our work can benefit the 385 million kids living in poverty today. This sense of urgency to bring change to this world is what differentiates me from other applicants.

4. List the technical courses you will be taking next semester, and please note which programming language(s) will be used, if applicable. If you have not registered for classes yet, please list the courses you plan on taking

Algorithms and Complexity in Python
Computer Structure and Organization
Quantitative Textual Analysis: Introduction to Text Mining

Developed a deep understanding of designing, programming, and shipping iOS applications

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***Come Thru – Invite Your Family**,* iOS Application (Firebase, Xcode8, Swift 3, cocoaPods) July 2018

- Developed knowledge on using the Model View Controller structure by creating a family invite application
- App received over 5000 downloads upon shipping it to the iOS App Store

Junior Economic Club Of Chicago, *Chief Executive Officer,* Chicago, IL March 2015 – July 2018

- Organized various educational and networking events for 100+ students and business executives
- Impacted 500+ students in Chicago through establishing key initiatives such as a startup incubator, a financial literacy program, and a youth council

Ethos*,* *Customer Support* Dec 2017 – Dec 2018

- Resolved thousands of customer tickets using knowledge of Blockchain technology on the live support team
- Compiled & handled bug reports on JIRA; published support articles on helpdesk, & automated internal processes for the team to operate more efficiently

- Help students of varying disciplines to design their ideas through their favorite CAD software and bring the idea to life by utilizing laser cutters, 3D printers, and power tools in the studio

Collegiate Scholars, University Of Chicago, Chicago, IL June 2015 – June 2018 Took STEM courses taught by University faculty while engaging in research and on-campus events and activities

Intern, University of Chicago Hospital May 2016 – August 2016

Worked in hospital's care service unit where I performed hundreds of phone interviews with patients to

gauge their experience staying at the hospital.

Interests: Add Philosophy

Robotics

- Built essential 3D printed mechanisms on the robot using Autodesk Inventor

Absolute Media Marketing, *Founder* Jan 2017 – June 2018

- Planned and executed viable strategies for local businesses to increase their online presence through social media marketing, rebranding, search engine optimization, and creating websites

JEC

Spearheaded the successful launch of additional JEC chapters outside and within the U.S.

Lion Run, Desktop Game (Unity 3D, C#) Nov 2017

- Coded a 2D platform game using Unity's Game Engine with a team
- Learned to use Git for version control; acquired skill to properly scope and execute projects under a timeline