# SHARWIN PATIL

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San Ramon, CA

Sharwin24

in SharwinPatil

# **EDUCATION**

# Northeastern University | Candidate for Bachelor of Science in Computer Science & Computer Engineering, Minor in Robotics

**Expected Graduation: 05/2024** 

Boston, MA

- GPA: 3.63, Dean's List (all semesters)
- Relevant Courses: Algorithms and Data, Embedded Design: Enabling Robotics, Circuits and Signals: Biomedical Applications, Fundamentals of Computer Science (II), Fundamentals of Networks, Cornerstone of Engineering, Calculus (III), Differential Equations & Linear Algebra.
- Activities: NEU Club Water Polo Treasurer, NURobotics Club Project Lead and Mentor.

### University College Dublin | NUin Ireland

**Fall 2019** 

Dublin, Ireland

• Activities: Clontarf U19 Water Polo Club, 2019 UCD annual "Startathon" (placed 2nd).

## Dougherty Valley High School

**6** 06/2019

San Ramon, CA

• Activities: Vex Robotics Competition (VRC) (Team Captain and Lead Design/Build), Led VRC team to Vex Robotics World Championship in 2018 & 2019. Varsity Water Polo (Captain).

#### **EXPERIENCE**

# Doble Engineering | Incoming Software Engineering Co-op

**=** 07/2021 - 12/2021

Marlborough, MA

# Northeastern University | First-Year Engineering Tutor

iii 01/2021 - Present

- Tutor first-year students in SolidWorks, C++, AutoCAD, MATLAB, and Arduino.
- Assist students with projects utilizing workshop machines (Bandsaw, Laser Cutter, 3D Printers).
- Member of FYELIC Advisory team, which guides and aids prospective FYELIC tutors.

# Dougherty Valley Robotics Club | Team Captain & Summer Camp Mentor

**=** 09/2015 - 06/2019

San Ramon, CA

- Drove the design, engineering and fabrication process for a competitive robot that was able to interact with physical objects and perform tasks.
- Wrote robot micro-controller in C++ for the control system.
- Documented and recorded the engineering process to present to judges at tournaments.
- Developed a curriculum to teach 30 middle school students the fundamentals of robotics with the VEXIQ system, students were ultimately able to construct and program a robot capable of completing multiple tasks and compete against other teams.

#### Chabot Space & Science Center | Volunteer Lab Demonstrator

**i** 06/2015 - 09/2019

Oakland, CA

- Explained science concepts to young kids utilizing experiments and demos.
- Taught young students the scientific method and methodology when conducting experi-
- Answered many questions from kids and adults alike about various concepts and the science field in general.

#### City of San Ramon Aquatics | Lifeguard

iii 06/2019 - 08/2019, 06/2020 - 08/2020 ▼ San Ramon, CA

- Certified in first aid, CPR, operation of an AED, Title 22, and administering emergency oxygen by American Red Cross.
- Turned swimming and water polo passion around to help the community.

#### **SKILLS**

C#/C++ Python Java

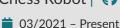
SolidWorks Arduino MATLAB

AutoCAD LaTeX

3D Printing

# **PROJECTS**

## Chess Robot | 😱



**NURobotics Club** 

- Construct a X/Y Plotter with a modified manipulator to interact with chess
- Implement Arduino and Rasberry Pi components to read the board state, control motors, and display information to the user.
- Design custom chess pieces and parts for the X/Y Plotter utilizing a 3D Printer.
- Incorporate a Chess AI to play against a human player.

#### Excel To LaTeX Converter | 😯



**12/2020** 

- Developed Python script to accept user input of copied Excel cells and convert to source code for a LaTeX table.
- Implemented user input to allow for improved utility and customization of the table's settings.

#### Image Processor in Java | 😯



**i** 06/2021

CS3500: Object-Oriented Design

- Developed a Java project to apply manipulations and enhancements to images and export them as various file types.
- Utilized a highly Object-Orented approach using the Model View Controller design pattern for improved extendibility and ease of modification.
- Collaborated with a classmate and utilized a GitHub repository to document the workflow.

#### **AWARDS**

**BSA Eagle Scout** 

VRC CA State Champion 2018 & 2019

VRC Awards (17x)

Varsity Water Polo MVP 2018 & 2019