# **Sardor Rahmatulloev**

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#### **EDUCATION**

Cornell University, College of Engineering

Expected May 2025

Bachelor of Science, Computer Science and Minor in Business, GPA: 3.3

**Relevant Coursework:** Object-Oriented Programming & Data Structures, Data Structures & Functional Programming, Discrete Structures, Linear Algebra, Python, Probability Models & Inference, Embedded Systems

#### **WORK EXPERIENCE**

Marketing & CS Member, Combat Robotics at Cornell - Ithaca, NY

Oct 2022 - Present

- Participated in an intensive 6 week program designing a 3lb robot in Fusion 360 under a budget of \$500
- Collaborated with 8 subteam members to raise \$10k+ in funds and maintain our corporate sponsors
- Renovated the team website to reflect current sponsors and projects using HTML, CSS, JavaScript
- Iterated upon the team video game using Unity and C# to showcase our robots in a battlebots arena game

# Computer Science Instructor, MyMentor - NYC, NY

Jun 2021 - Present

- Instructed students in Python, Java, and basic Web Development using HTML, CSS, JavaScript
- Held weekly sessions covering class content and developed practice exercises in Python and Java
- Hosted code review sessions, held resume workshops, and aided in their academic and career preparation

# E-Commerce Startup and Web Developer, Shopify - NYC, NY

Jan 2020 - Nov 2020

- Iterated upon landing page with JavaScript frameworks, HTML, CSS which improved user satisfaction by 33%
- Negotiated pricing with two suppliers and sourced products for 30% profit and generated 4-figure revenue
- Exponentially improved profits through Facebook Ads with 100k+ reach audience with increased sales of 20%

# Data Science Research Intern, C2SMART - NYC, NY

May 2020 - Aug 2020

- Utilized Citi Bike database to identify low demand bike stations and redistribute bikes to increase accessibility
- Identified popular hospital locations during COVID-19 by aggregating bike stations in proximity of hospitals and plotted on MapBox. Observed an increased demand for bikes near health facilities during a pandemic

### **PROJECTS**

### Monte Carlo Tree Search Algorithm Application (OCaml)

Aug 2022 - Dec 2022

- Developed the Connect Four board game using OCaml and built a terminal interface using ANSITerminal
- Utilized the Monte Carlo Tree Search algorithm to heuristically evaluate the current best placement of a chip
- Extensively tested the game modes and AI algorithm using OUnit testing with 92% code coverage

### Variable Path Finding Maze Game (Java)

Apr 2022 - May 2022

- Implemented Dijkstra's algorithm to optimally traverse a randomized maze with a 100% success rate
- Built a front facing graphical user interface with functions like generating new maps and randomizing coins
- Prioritized pathing with most coins while minimizing the distance traversed using break-even analysis

#### K-Clustering Data Algorithm (Python)

Oct 2021 - Nov 2021

- Incorporated a K-means clustering method for partitioning data into clusters using mean-based quantization
- Partitioned data through recursive trials to converge points towards a cluster through machine learning
- Utilized Python with NumPy arrays and developed a graphical user interface

#### **SKILLS & ACTIVITIES**

**Languages & Tools:** Python, Java, C, C#, OCaml, HTML, JavaScript, CSS, Unity, Git, Linux, AutoCAD, Fusion 360 **Activities:** Under Represented Minorities in Computing, ColorStack, Association of Computer Science Undergraduates