

Riley Drcelik

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Education

CUNY Borough of Manhattan Community College

Expected May 2025

AS in Engineering Science

- GPA: 3.7/4.0
- **Coursework:** Data Structures & Algorithms, Circuits, Machine Learning, Physics II
- **Awards:** Out in Two Scholar, Phi Theta Kappa, BMCC Honors Program, Dean's List

Experience

Club President, Programming Lead

New York, NY

BMCC Robotics Club

Aug 2024 - Present

- Expanded club membership from 10 to 52 by leading outreach initiatives through advertising, networking at club fairs, and collaborating with classmates
- Directed club operations, managing officers, planning events, and organizing trips; implemented member feedback to create club merchandise and tailored activities to engage beginners in robotics increasing member retention by 150% over previous semesters

Data Science Intern

New York, NY

32BJ Benefit Funds

Jul 2024 - Aug 2024

- Developed and tested AI models with 90% accuracy using techniques such as XGBoost and Logistic Regression, and analyzed data with heatmaps in Jupyter Notebook
- Enhanced model accuracy from 70% to 90% by applying advanced data cleaning, feature engineering, and selection techniques, including Chi-Square, Mutual Information, and encoding
- Streamlined task management and automated workflows with Azure DevOps and Git, reducing task completion time by 30 hours per month while enhancing collaboration and gaining proficiency in managing tickets and deployments

Projects

Object Follower Robot

[Project Link](#) 

- Produced project to apply circuits concepts including voltage division and system tuning
- Robot wirelessly tracks user-selected object using UART and I2C Communication connected to a Pixy camera for local object detection
- Reduced cost by 150% by using 3D printed material over preset chassis and locally sourcing parts

Macaulay X MTA Datathon

[Project Link](#) 

- **First Place**, Macaulay Hackathon (**20 teams, \$2000 prize**)
- Analyzed fare evasion rates using Pandas and Seaborn to visualize differences across universities
- Collaborated with team to find \$0 solution promoting awareness of FairFares program at CUNYs by advertising on main page, redirecting funds from less effective marketing strategies

BMCC Face AI

[Project Link](#) 

- **Second Place**, BMCC AI Innovation Challenge (**25 teams**)
- Prototyped face recognition system with OpenCV for gathering face embeddings and MongoDB to store faces, achieving 90% accuracy
- Scaled with MongoDB and deployed demo using Vercel, enabling school-wide improving on current system

Beaver Bot

[Project Link](#) 

- Line follower robot for 2024 ASEE national robot design competition.
- Prototyped using Fusion360, printed and assembled design, and soldered connections together
- Utilizes a line follower with PID control system, using IR sensors to detect objects to grab with micro servos
- Iterated over multiple designs with team, providing feedback each iteration, improving finish time by 250% (3:56 to 1:28)

Skills

Programming Languages: C++, Python, HTML/CSS, React, Typescript, Javascript, MATLAB, R

Software: Git, Jupyter Notebook, Excel, Firebase, Vercel, Arduino, Figma, MongoDB, Autodesk Fusion360, Inventor, Multisim

Frameworks: PyTorch, OpenCV, Next.js, Express.js, Node.js, Expo + React Native