Colden Bobowick

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Education

Brown University, *Candidate for Sc.B. in Applied Mathematics–Computer Science (GPA: 4.0/4.0)* — Providence, RI
- Pursuing the Certificate in Entrepreneurship — *Expected Graduation: May 2025*
- Relevant Courses: Software Engineering, Data Structures & Algorithms (TA), Managerial Decision Making

Newtown High School, *Top 5% of Class (GPA: 4.0/4.0)* — Sandy Hook, CT
2017-2021

Technical Projects

StyleGAN-Generated Face Detector, *Computer Vision Research Project (Website)* — TensorFlow, Python, NumPy, OpenCV
- Designed a convolutional neural network which can detect a GAN-generated face image with 93% accuracy — *Spring 2023*
- Conducted meticulous fine-tuning of the fully connected feature classifier to increase accuracy by over 6%, which enabled the model to surpass the 90% benchmark for success
- Demonstrated exceptional leadership and resilience by successfully adapting goals and driving the project to completion amidst significant external challenges faced by the team
- Implemented the Dlib eye extractor to detect and crop eyes from face images with 99.9% accuracy
- Leveraged cross-disciplinary skills in deep learning and web development to create an interactive image upload feature, significantly expanding the impact of the project

Eventify, *Software Engineering Project (Website)* — Java, TypeScript, Moshi, Spark, Maven, Firebase, GitHub
- Designed a full-stack webapp to retrieve a Spotify user's top genres and display relevant and local live events — *Fall 2022*
- Engineered the Spotify Web API handler to enable seamless communication between the Spotify API and frontend
- Utilized version control to pinpoint a critical backend integration anomaly, resolve the issue, and merge a working branch despite demanding time constraints
- Caught several critical anomalies before submission by developing comprehensive backend unit tests and end-to-end integration tests to verify expected functionality

Professional Experience

Rockwell Automation, *Software and Test Engineering Intern* — Milwaukee, WI
- Develop rigorous end-to-end feature tests for the FactoryTalk Optix IDE, contributing to the creation of a robust, anomaly-free, high-quality product for customers — *2023-Present*
- Proposed the company-wide implementation of GitHub Copilot to significantly enhance development efficiency, with potential developer productivity gains of up to 55%
- Reduce test developer hours by automating new feature tests using Python to simulate customer use scenarios
- Lead a high-performing team in the Student Innovation Challenge, driving the selection of AI as the focus topic and overseeing the development and analysis of two groundbreaking business use cases
- Gained proficiency in Agile Scrum methodologies through hands-on experience, adapting to the fast-paced and dynamic nature of the development cycle, effectively managing priorities and ensuring timely completion of stories

Brown Space Engineering, *Attitude Determination and Control Systems Lead* — Providence, RI
- Lead a group of 5 students to research, design, and implement the attitude control system for the PVDx cube satellite — *2021-Present*
- Designed multiple mathematical models, including a parametric analysis of magnetorquer properties, to aid in the decision-making and design optimization process (*website*)
- Coordinated a comprehensive literature review on attitude control systems, analyzing relevant research papers to evaluate the feasibility of different control systems for PVDx
- Present the progress and findings of the attitude control system research and implementation, effectively communicating complex technical concepts to a diverse group of stakeholders

Tuck School of Business at Dartmouth, *Tuck Business Bridge Program* — Hanover, NH
- Selected for a highly competitive 3-week program taught by MBA faculty, providing an in-depth introduction to marketing, strategy, leadership, accounting, and finance — *January 2022*
- Utilized financial and strategic assessment techniques to evaluate the future of Rivian Automotive, considering factors such as market potential, competitive landscape, and growth prospects
- Employed a discounted cash flow analysis to estimate the company's intrinsic value and predict its financial viability
- Presented the findings and recommendations from the valuation analysis in a final presentation, showcasing effective communication and presentation skills

Skills & Interests

- **2021 National Merit Scholar**
- **Technical Skills:** Python, Java, JavaScript, TypeScript, HTML/CSS, MATLAB, React, Git, NumPy, Pandas, TensorFlow, object-oriented programming, Agile development, test development
- **Interests:** hackathons, math modeling competitions, LaTeX enthusiast, rock climbing, hiking, photography