

# BRIAN A. CHESKO

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## EDUCATION

**Rowan University**, Glassboro, NJ

*Bachelor of Science, Mechanical Engineering*

*Bachelor of Science, Computer Science*

Honors Concentration, Minor in Mathematics

*Anticipated May 2021*

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*GPA 3.98/4.0*

## TECHNICAL SKILLS

**Programming Languages:** Python, MATLAB, Java, C, JavaScript, Redux, React, PostgreSQL, Bash Shell Scripting

**Operating Systems & Tools:** SolidWorks (CSWA Certified), Unix, macOS, Windows, Git, LaTeX, Microsoft Office

**Skills:** Geometric Dimensioning and Tolerancing (GD&T), Basic Fabrication, 3D Printing, Project Management

## PROJECTS

### Formula SAE Electric Student Competition

*Spring 2020*

- Manufactured components for the all-electric vehicle's accumulator pursuant to FSAE regulations
- Conducted thermal and flow analyses on systems to determine part specification requirements for cooling subsystem

### SolidWorks Car CFD Optimization

*Spring 2020*

- Designed the exterior of a model car to maximize downforce and minimize aerodynamic drag
- Ran studies using the SolidWorks Flow Simulation toolbox to quantify effects of modifications
- Incorporated components such as wings, vortex generators, and geometries based on fluid flow theory to achieve a lift-to-drag ratio of -3.0

### Reciprocating Air Engine

*Fall 2019*

- Designed and modeled several components towards the production of a 50cc linkage-driven air-powered engine using SolidWorks
- Manufactured aluminum, brass and delrin parts using various machining techniques including water jet cutting, milling, reaming, and turning
- Achieved peak no-load operation of 2600 rev/min using a 100 psi air line

### Differential Gearbox

*Fall 2019*

- Constructed gearbox design out of 3D-printed bevel and spur gears and aluminum housing
- Performed static and fatigue analysis of parts using SolidWorks to determine the failure conditions and factor of safety of the design with design requirements of 1000 rev/min inputs

## PROFESSIONAL EXPERIENCE

### Software Engineering Intern (Back-end)

*May 2019 - August 2019*

*Clover Network, Inc., New York, NY*

- Built more than a dozen RESTful API endpoints on top of the product's Java back-end interfacing with a PostgreSQL database towards a new service allowing merchants to efficiently import large external lists of customers into their customer audience
- Updated behavior and logic of existing web service features according to new specifications; documented these changes within internal documentation

### Software Engineering Intern (Front-end)

*July 2018 - September 2018*

*Clover Network, Inc., New York, NY*

- Designed and implemented the logic for a new part of the clover.com front-end shop experience using a responsive React/Redux-based ES6 framework

### Learning Assistant

*January 2018 - Present*

*Rowan University Computer Science Department, Glassboro, NJ*

- Instruct students in lab classes of up to 30 students to help teach computer science course materials
- Provide one-on-one assistance to students as necessary to address lapses in understanding and reinforce good programming practices

## ACTIVITIES

### Rowan Unified Sports, Volunteer

*October 2017 - Present*

### ICPC Mid-Atlantic Programming Contest, Participant

*November 2018, 2019*

- Placed 1st at Washington College testing site in 2019
- Developed efficient solutions to various problems under demanding time and resource constraints