Michael A. Bick

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US Citizen

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Education

Aug 2016 - Present	**Mechanical Engineering Major, Robotics Minor** | GPA 3.58/4.0
	Georgia Institute of Technology, Atlanta, GA
	Dean's List
	2nd Year Junior, Expected Graduation June 2020

Academic Projects

Aug 2016-Present

GT Motorsports \| Powertrain Team Member
- Simulating engine dynamics with the eventual goal of increasing efficiency and low-end torque by lowering power-band
- Designing and manufacturing improved camshaft to match optimal lift profile

Aug 2016-Present

RoboJackets \| Team Member
- Lead design of a 3lb combat robot including CAD, chassis analysis, and weapon optimization
- Manufactured robotic mechanism components using precision machinery including CNC mills, lathes, and waterjets

Aug 2011-Jun 2016

MilkenKnights FRC Team \| Team Captain
- Managed the 6-week design and construction of a robot, including rapid prototyping, CAD, manufacturing, and control dynamics
- Created top-down Solidworks models of transmissions, gearboxes, and complex linkages
- Implemented position PID, velocity PID, vision tracking, motion profiles, and path following
- Trained students in CAD and operating precision machinery including a mill, lathe, and CNC router

Sept 2014-Jun 2016

ASCE Bridge Building Team \| Team Captain
- Constructed a three foot, one pound popsicle stick bridge that withstood over 950 pounds of force
- Used FEA and deformable body analysis to validate design

Sept 2014-Jun 2015

Conrad Spirit of Innovation \| Programming/Electrical Lead
- Designed for a belt than warned the visually-impaired of threatening obstacles
- Wired and programmed a LIDAR tracking system using an Arduino microcontroller

Technical Skills

CAD	Solidworks(7 years), Autodesk Inventor(8 years), Top-down Design, Parametric Design, Surface Modeling
Manufacturing	Haas CNC, Manual Mill, Manual Lathe, Laser Cutter, Waterjet, 3D Printer
Programming	MatLab, Java, HTML, CSS, SASS, Android, Python, LaTeX
Microcontrollers	Arduino, NI myRio/roboRio(LabView)
Software	Vim, Adobe Illustrator, Word, Excel

Awards & Honors

Nov 2017	7th/60	Georgia Tech ME2110 Design Competition
Apr 2016	2nd/42	FIRST Robotics Orange County Regional
Mar 2015	3rd/41	FIRST Robotics Ventura Regional
Mar 2015	3rd/53	FIRST Robotics Utah Regional
Oct 2014	International	Conrad Spirit of Innovation Semi-Finalist
Mar 2013	1st/65	FIRST Robotics Los Angeles Regional