MICHAEL A. BICK

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EDUCATION

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 components using precision machinery including CNC mills, lathes, and waterjets
- Created autonomous path planning and motion profile algorithm using Matlab

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

SEP 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