# 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

## TECHNICAL SKILLS