

# Gabe E. Blankemeyer

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## EDUCATION

Northeastern University, Boston, MA

May 2021

**Major:** Bachelor of Science in Mechanical Engineering

**Courses:** Behavior of Processed Materials, Finite Element Analysis, Fluid Mechanics, Heat Transfer

**Activities:** Rock Climbing club, Trap & Skeet Shooting team, Officer of Delta Tau Delta fraternity at Northeastern

Westlake High school, Austin, TX

May 2016

**Relevant Courses:** Robotics I-III, AP Computer science I-IV

**Activities:** FIRST Tech Challenge team Captain (#3781), FIRST Robotics Competition team Captain (#2468)

## SKILLS

**Applications:** AutoCAD, SolidWorks, Creo (Pro E.), ANSYS, MATLAB, Excel, MeshMixer

**Programming Languages:** Java, Python, Arduino

**Tools:** Lathes, Mills, CNC mills, basic shop tools, band saws, chop saws, soldering, welding

**World Languages:** Fluent in Spanish, and English, conversational in German

## ENGINEERING EXPERIENCE

Mechanical Engineer | Desktop Metal, Burlington, MA

Jan 2019 – July 2020

- Designed, machined, and reworked parts as needed for several project teams within the company
- Redesigned problematic components within the Single Pass Jetting (SPJ) metal printing systems
- Designed a metal powder vacuum conveyance system with custom manifold for waste powder recirculation to SPJ systems, meeting with unique manufacturers to ensure quality of parts and timelines were met
- Worked under the director of design to assist the FIBER composites printing team in the design of several features, components and consumables of their composite material 3D printers

Robotics Systems Engineer | QinetiQ-NA, Waltham, MA

Jan 2018 – Jun 2018

- Created drawings and 3D models using Creo managed with Windchill PDM
- Designed foam insert for robot shipping case, previously parts were bubbled wrapped, and jam fitted into box
- Designed and manufactured prototype sensor mounts and unique attachments for robots
- Developed procedural documents on new techniques for field calibrating robot encoders

3D Print Specialist | Lonquist & CO. Petroleum Engineers, Austin, TX

Sep 2015 – Sep 2016

- Collaborated with Sonar and Chemical Engineers to transform sonar data of underground salt caverns into scaled 3D models for use in meetings with clients
- Wrote Python scripts and Excel macros to transform sonar data into AutoCAD scripts, from which 3D models of underground salt caverns were made. 3D printed cavern models as gifts for company clients

Head Machinist | FIRST Robotics Competition team #2468, Austin, TX

Sep 2012 – May 2016

- Organized and led a sub team responsible for designing, prototyping, and implementing robot features
- Maintained and operated mills, lathes, band saws, drill presses, sheet metal CNC's, and plasma cutter tables
- Created and installed equipment for mills, and lathes, such as machinist jacks, and digital read out systems
- Collaborated with other sub team leads on design features to facilitate, and quicken machining process
- Ran time trials of 2015 robot, finding key areas to upgrade leading to a 42% score increase per match, pushing robot performance into top 13 in the world
- Researched and published a white paper on AndyMark Swerve Drive modules
- Shot, edited, and published multiple videos, such as season recaps and robot/product reveals

## INTERESTS

**Family restaurant:** Contributed to customer experience enjoying Texas smoked brisket by implementing automated thermal monitoring and fan control systems for meat smokers, and designed 1000-gallon smoker increasing meat output to meet demand while maintaining wood burn rate and food quality

**Robotics:** Constructed an alcohol spill and light finding robot, built and raced FPV (first person view) quad copters

**Tools:** Purchased and restored mills, lathes, and machine accessories from auction sites