

# AMATHEON BOHAN

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## EDUCATION

### Georgia Institute of Technology

Senior | GPA: 3.2

Candidate for Bachelor of Science in Mechanical Engineering with a Minor in Energy Systems

### Georgia Tech Lorraine

Atlanta, GA | Aug 2017–Dec 2021  
Metz, France | Aug 2019–Dec 2019

## WORK EXPERIENCE

### R.N.C. Industries, Inc | *Machine Design Engineering Intern*

Atlanta, GA | May 2021–July 2021

- Designed machines to automate the fabrication of R.N.C.'s packaging insulation inserts while working directly with the CEO
- Designed, coded, CADed, fabricated, wired, tested, and implemented a computer controlled bandsaw now used on warehouse floor
- Coded, CADed, wired, tested, and implemented a machine designed to fabricate plastic bags for insulation panels
- Used Raspberry Pi4, Arduino Mega 2560, and Arduino Uno as drivers for both machines designed
- Manufactured both machines entirely in R.N.C. Industries research and development facility including complete fabrication and wiring

### Learn3Ride, LLC | *Contracted Engineer*

Pittsburgh, PA | Dec 2019–Jan 2021

- Designed, prototyped, and tested a moveable, trailer-based bicycle ramp and release system to enable children to learn how to ride
- Constructed a prototype of the ramp and release system while consulting a professional engineer for guidance
- Constructed an updated, finalized version of the bicycle ramp and release system out of more weather resistant materials
- Successfully tested the final bicycle ramp and release system design and utilized the system to teach children around Pittsburgh
- Assembled ramp and release system in Solidworks and developed drawings for a patent lawyer to develop a patent pending

### Woodland Hills Club | *Assistant Manager*

Pittsburgh, PA | May 2015–Aug 2020

- Responsible for opening facility, maintaining operational systems, operating pool equipment, ensuring a safe environment for patrons

### Learn3Ride, LLC | *Senior Instructor*

Pittsburgh, PA | April 2017–Aug 2020

- One of two senior instructors independently teaching students the mechanics of a bicycle and how to ride in three structured lessons

## PROJECTS

### Wind Engineering Wind Farm Design | *Individual Project*

Pittsburgh, PA | May 2020–July 2020

- Selected a region in the world with good wind resources and researched the energy needs, sources, and political policy of that region
- Designed a wind turbine specific to the selected wind farm site and simulated the efficiency of the wind turbine using WT\_PERF
- Conducted an in depth economic analysis of individual wind turbines and extrapolated to understand the cost of an entire wind farm
- Assessed precautions to understand how to protect the avian and marine wildlife around the wind farm site

### Fully Automated Mechatronic Robot | *Team Leader*

Atlanta, GA | Aug 2018–Dec 2018

- Planned and organized robot subsystem designs with house of quality, function tree, morph charts, Gantt charts, evaluation matrices
- Designed individual robot subsystems and assembled subsystems in Solidworks
- Coded multiple different code systems in LabView to account for varying initial problem conditions
- Built and prototyped robot subsystems out of wood and mechatronics using various drilling and sawing methods

## PATENTS

Bohan, Amatheon. 2021. Bicycle Ramp. Application No. 17/145,450, filed January 11, 2021. Patent Pending

## SKILLS

**Course Concepts:** renewable energy systems, electrochemical storage, environmental design, science of alternative energy, Solar PV, fuel cells, design and manufacture, dynamics, statics, kinematics, kinetics, angular and linear momentum, moments, mass moments of inertia, heat transfer, torques, conservation laws, normal and shear stresses and strains, system dynamics, thermodynamics, fluid mechanics, experimental methodology, circuitry, numerical methods, multivariable calculus, linear algebra, differential equations, economics, wind engineering, SONAR, data analysis, house of quality, Function tree, specification sheet, morphological charts, Gantt charts, evaluation matrices, oral technical reports, formal reports, executive summaries, accurate to scale hand drawings, energy policy, conversational French, CPR certified, AED certified

**Software:** SolidWorks 3D CAD, MATLAB, FEA, Raspberry Pi, Arduino, Python, C++, Excel, Windows, Mac OSX, myRIO, LabView, Mechatronics, WT\_PERF, MS Office

**Instrumentation:** Drill press, multimeter, voltmeter, bandsaw, jigsaw, oscilloscope, function generator, mill, lathe, soldering iron, hand drill, hand saw, 3D printer, sander, circular saw

## LEADERSHIP/ACTIVITIES

### Georgia Tech Tribe Ultimate Frisbee | *Spirit Captain and Social Chair*

Atlanta, GA | Aug 2017–Present

### USA Triathlon | *Self-Trained*

Pittsburgh, PA | May 2014–Present

- Qualified for National Championships (2016–2021), World Championships (2017, 2018), and PA State Champion 2019

### American Society of Mechanical Engineers (ASME) | *Member*

Atlanta, GA | Aug 2018–Present

### Varsity and Club Swimming | *Captain*

Pittsburgh, PA | May 2005–Aug 2017