Ryan R. Gysin

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Education

Apr 2017 | Bachelor of Science in Computer Engineering
University of Michigan, Ann Arbor
Relevant Classes: Operating Sytems, Machine Learning, Microprocessor Design, Embedded Control Systems, Computer Security, Logic Design, Computer Organization, Signals and Systems, Data Structures and Algorithms
GPA: 3.0/4.0

Projects

Apr 2017 – Jan 2017 | MGoKart
- Created autonomous gokart as concept for autonomous formula car
- Developed path planning algorithms and simple kalman filter in Python to steer the kart and filter out erroneous data from sensor suite
- Designed hardware and communication architectures to allow power distribution and communication between central microprocessor and motors
- Wrote communications code in C, Python, and Arduino to allow communication between the software algorithms, controls algorithms, and motors
- Minimized noise in wires across the kart

Dec 2014 – Sept 2013 | Mechanical System Design
- Harnessed Rotational Momentum of bicycle to light a light bulb using chain linkages and magnetic induction
- Designed and built truss system to support weight of bicycle and rider, as well as horizontal forces caused by pedaling
- Prioritized money vs. performance as well as budgeted time

Work Experience

Current – July 2017 | Nexteer Automotive, Saginaw, MI
Manufacturing IT Engineer
- Co-led C# development training session specializing in WPF and .NET frameworks
- Designed C# applications to act as interface between PLC's and SQL databases

Aug 2016 – May 2016
- Developed PLC routines to communicate with C# application and make decisions about whether or not the part meets specifications
- Maintained computers running on plant floor to reduce down time of plant lines

Apr 2017 – Sept 2015 | Michigan Autonomous Aerial Vehicle (MAAV)
President and Navigation Lead 2016-2017
- Led team to place 2nd in the 2016 International Aerial Robotics Competition (IARC)
- Developed computer vision code for detecting corners and ground robots based on size and color
- Designed and tested code that tuned computer vision software to reduce noise in images
- Organized team structure and led weekly meetings to keep sub-team communcation
- Managed entire team code base using git

Apr 2017 – July 2014 | U of M Parking and Transportation Services, Ann Arbor, MI
Bus Operator
- Responsible for the transportation and well being of hundreds of students daily
- Learned to manage different personalities through communicating with simultaneously with passengers frustrated about delays, other drivers, and dispatch

Aug 2014 – Sept 2013 | U of M Mechanical Engineering Department, Ann Arbor, MI
Research Assistant to Dr. Eric Johnsen
Created GUI to model bubble cavitation in a viscoelastic media using Matlab

Additional

Languages: C++, C, C#, Python, SQL, LaTeX, Verilog, Ruby
Tools: Git, Matlab, OpenCV
Traveled around the world in 48 days