Ryan R. Gysin

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Education

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

Experience

Current | Microsoft, Redmond, WA
Nov 2018 | *Software Engineer*
- Reduced build failures by 90% by moving imaging jobs to Azure VMs reducing cross pollination
- Updated job scheduler to support different worker node types

Oct 2018 | Nexteer Automotive, Saginaw, MI
July 2017 | *Manufacturing IT Engineer*
- Designed C# applications to act as interface between PLCs and SQL databases

Aug 2016
- Wrote LabVIEW VIs to decode JSON messages and transmit them through TCP sockets

May 2016
- Developed PLC routines to communicate with C# application and make decisions about whether or not a part meets specifications
- Co-led C# development training session specializing in WPF and .NET frameworks
- Maintained computers running on plant floor to reduce down time of plant lines

Apr 2017 | Michigan Autonomous Aerial Vehicle (MAAV), Ann Arbor, MI
Sept 2015 | *President and Navigation Lead 2016-2017*
- Led team of 40 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 ensure all sub-teams were on track
- Acquired corporate sponsorship totaling $40k and managed annual budget
- Managed and reviewed entire team code base using git

Projects

Apr 2017 | MGoKart
Jan 2017
- 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, including a lidar and encoders
- Designed and built hardware architecture to allow power distribution and communication between central microprocessor, motors, and sensors
- Wrote code in C, Python, and Arduino to allow communication between the software algorithms, controls algorithms, and motors
- Reduced electromagnetic interference in wires across the kart by approximately 80%
- Simulated sensor inputs to system and validated outputs using vehicle dynamics model

Additional

Languages: C++, C, C#, Python, T-SQL, LaTeX, Verilog, Ruby
Tools: Git, Matlab, LabVIEW
Assisted in research resulting in childrens book about cavitation bubbles
Drove U of M blue buses for 3 years while in college