

# Ryan R. Gysin

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## EDUCATION

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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

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*Current* | MICROSOFT, Redmond, WA  
NOV 2018 | *Software Engineer*  
Reduced build failures by 90% by isolating imaging jobs in Azure VMs  
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

## PROJECTS

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APR 2017 | MICHIGAN AUTONOMOUS AERIAL VEHICLE (MAAV)  
SEPT 2015 | *President and Navigation Lead 2016-2017*  
Led team of 40 to place 2<sup>nd</sup> 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

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

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Languages: C++, C, C#, Python, T-SQL,  $\text{\LaTeX}$ , 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