

# Ryan R. Gysin

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## EDUCATION

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APR 2017	Bachelor of Science in COMPUTER ENGINEERING <i>University of Michigan, Ann Arbor</i> 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
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## EXPERIENCE

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Current	MICROSOFT, Redmond, WA
NOV 2018	<i>Software Engineer</i> Reduced build failures by 90% by moving imaging jobs to Azure VMs reducing cross pollination Wrote unit tests for creation of Windows installable media
OCT 2018	NEXTEER AUTOMOTIVE, Saginaw, MI
JULY 2017	<i>Manufacturing IT Engineer</i> 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	<i>President and Navigation Lead 2016-2017</i> 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

## PROJECTS

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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, L<sup>A</sup>T<sub>E</sub>X, 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