

**Programming Languages:** C++, Embedded C, Python, MatLab, Java  
**Robotics Tools:** Robotic Operating System, Gazebo, V-REP, OpenCV, Keras, PyTorch  
**Other Tools:** Unix ecosystem, Windows kernel development, CUDA/openACC  
**Languages:** English (native), Russian (native), Spanish (proficient)

## EDUCATION

### **Carnegie Mellon University**

2019 – 2021 (expected)

- Master of Science in Robotics
- Advisor: Prof. Kris Kitani

### **University of Minnesota**

2015 – 2019

- Bachelor of Science (Honors) in Computer Engineering, Summa Cum Laude with Distinction
- Thesis: *Indoor Micro-UAV Navigation with Minimal Sensing* (Prof. Volkan Isler & Prof. Derya Aksaray)
- IEEE-Eta Kappa Nu – Omicron Student Chapter – Vice President 2018-2019

## WORK EXPERIENCE

### **Nextdroid Robotics, Software Engineering Intern**

Summer 2018

- Achieved sensorless high-precision motor speed control for subsea robotic platform
- Co-developed high-accuracy image processing pipeline on military hardware
- Designed data storage architecture using Ruby/AWS for secure client data processing

### **National Instruments, Software Engineering Intern**

Summer 2017

- Implemented network interfaces for measurement device drivers
- Developed encryption schemes for device firmware/driver communication

### **Robotic Sensor Network Laboratory, Research Assistant**

2015-2019

- Research in autonomous robotic rendezvous problems
- Development of GPS-denied micro-UAV platform for agricultural monitoring

### **Department of Civil Engineering, Computer Science Research Assistant**

2015-2016

- Massively parallelized state-of-art wave algorithms & designed MN Dept. of Transport user interfaces

### **Laketrails Base Camp, Guide**

2014-2015

- Led teenagers on five day canoe trips in Northern Minnesota

## PROJECTS

### **Gesture Based Micro-UAV Control**

Fall 2017

- High precision gesture tracking to control micro-UAV flight & control language for flight plans

### **Micro-UAV Agricultural Monitoring Platform**

2017-2019

- Fully autonomous system for data collection in restricted environments
- Lightweight (<50g) package for quick and easy deployment

### **Contour Plot Software/Wrappers**

Spring 2016

- Java software rapidly reads/processes/displays data from ground penetrating radar

### **iRobot Create Autonomous Navigation**

Fall 2015

- C++ implementation of autonomous navigation algorithm with minimal sensing