Dennis Melamed

763-656-9518
dennis@dennismelamed.me
www.dennismelamed.me

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