

# Dennis Melamed

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## EDUCATION

University of Minnesota: Minneapolis, MN

2015- expected graduation 2019

- College of Science and Engineering (Honors)
- B.S. Computer Engineering (3.883 GPA)

## WORK EXPERIENCE

Software Engineering Intern, National Instruments

Summer 2017

- Implementation of network interfaces for measurement device drivers
- Investigation of encryption methods for device firmware-to-driver network connections

Research Assistant, Robotic Sensor Network Laboratory

2015-present

- Research in autonomous robotic rendezvous problems using iRobot Create platform
- Development of micro-UAV platform suitable for agricultural monitoring

Computer Science Research Assistant, Department of Civil Engineering

2015-present

- GPU parallelization of state-of-the-art wave propagation algorithms
- Interface design for MN Department of Transportation

Guide, Laketrails Base Camp: Oak Island, MN

2014-2015

- Led teenagers on five day canoe trips in Northern Minnesota

## PROJECTS

Gesture Based Micro-UAV Control

Fall 2017-present

- High precision gesture tracking system to control micro-UAV flight
- Control language allows for on-the-fly operator-designed macros

Micro-UAV Agricultural Monitoring Platform

Fall 2017-present

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

LinkedIn Resume Generation

Summer 2017

- Python graphical user interface generates resume from given LinkedIn profile

Contour Plot Software/Wrappers

Spring 2016

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

iRobot Create Autonomous Navigation

Fall 2015

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

Open Source Robotic Macro Development

2014-2015

- Java software allowing FIRST robotics teams to record robot motions for later autonomous playback

## CERTIFICATIONS AND SKILLS

- C++ development
- Embedded C development
- Java development
- Python development
- Russian fluency
- Spanish proficiency
- Unix development
- Windows Kernel development
- Robotic Operating System development
- Gazebo & V-REP simulation