

# Nicholas Fischer

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## **Qualifications:**

### **Engineering:**

Vision Based Control and Computer Vision experience  
Creation and implementation of engineering orders for mechanical design changes  
Proactive problem solving techniques  
Professional written and oral communication skills  
Effective team-based leadership

### **Programming:**

C++, Java, MatLab, LabView, PHP, Perl, HTML

### **Computer Software:**

Pro/Engineer Wildfire 3.0

Solidworks 2008

Pro/Engineer Mechanica

I-DEAS 10

National Instruments LabView 8.0

Microsoft Office Suite (**Advanced Knowledge**)

Microsoft Windows (**Advanced Knowledge**)

Microsoft Visual Studio

Linux (RTOS: QNX, Ubuntu)

Typing – 60 wpm

## **Education:**

### **University of Florida**, Gainesville, FL

Magna cum Laude, Bachelor of Science in Mechanical Engineering, December 2008, GPA: 3.63 / 4.00

Doctor of Philosophy in Mechanical Engineering, Expected December 2012, GPA: 3.88 / 4.00

## **Experience:**

### **University of Florida**, Gainesville, FL

5/07 - Present

*Research Assistant, Nonlinear Controls and Robotics – Dept of MAE*

**Responsibilities:** Laboratory experimentation and theory including visual control systems, mobile robotics, and six degree of freedom robotic manipulators. Focus on Vision Based Control for position and speed estimation of objects using stationary and actuated cameras and camera networks, dynamic prediction of objects through occlusions and maintaining dispersing objects within the camera field of view.

### **Honeywell International**, Clearwater, FL

5/06 – 8/06

*Mechanical Engineering Intern, Guidance and Navigation CoE*

**Responsibilities:** Working closely with a mechanical engineering team to design and maintain guidance applications for military vehicles. Projects focus on electronic packaging. Operations include design drawing changes, material research, thermal, force, stress, vibration, material, and tolerance analysis and calculation.

### **Raymond James Financial**, St. Petersburg, FL

5/03 – 8/05

*Intern, IT - Workstation Services, IT - Broker Application Support, Distribution Services*

**Responsibilities:** Updating clients to Windows XP Service Pack 2 or Windows 2000 Service Pack 4; Updating and installing TrendMicro PCCillin 2005 Antivirus software; Installing Raymond James Virtual Private Networking Software; Designing customized workspaces and installing/troubleshooting Reuters Stock Trading Software; General Microsoft troubleshooting via phone and LanDesk Remote Management Suite.

## **Activities:**

### **Human Powered Submarine Project**, University of Florida

5/07 - Present

*Project Captain*

Able to lead a team of student peers to develop a submarine to compete against other collegiate teams.

Project encourages the development of practical design techniques through computer aided modeling, computational fluid dynamics and finite element analysis in addition to manufacturing processes.

### **Subjugator Project**, University of Florida

01/09 - Present

*Vision Control, Control Design, Software Development*

Design and implement visual control algorithms for an autonomous submarine using computer vision techniques.

**Additional Affiliations:** Pi Tau Sigma Mechanical Engineering Honor Society (Webmaster), American Society of Mechanical Engineers, Golden Key International Honor Society, National Society of Collegiate Scholars, Who's Who Among Collegiate Students

**Undergraduate Thesis:** "Assessment of Image-Based Target Tracking Methods", 12/08