

# HOSSEIN GHAFFARI NIK

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## OBJECTIVE:

Seeking a position in Electrical Engineering with special interest in Controls, Robotics, Signal Processing and engineering R&D.

## EDUCATION:

**M.S. in Electrical Engineering**, August 2009, GPA 3.63  
**George Mason University, Fairfax, VA**

- *Specialization in Control and Robotics with relevant courses which included:*
  - Random Processes & Adaptive Signal Processing
  - Systems Identifications
  - Mobile Robots
  - Optimal Control Theory
- **Master's Thesis:** *Hum-power Controller for Powered Wheelchairs*,
  - Designed, built and tested a working PCB prototype for hands-free operation.
  - Using DSPs and Microcontrollers performed Speech Recognition and FFT.
- **Patent Pending:** *"Method for Control Using a Humming Frequency"*

**B.S. in Electrical Engineering**, January 2007, GPA 3.68  
**George Mason University, Fairfax, VA**

- **Group Design Project:** *AMBER Child Protection System*,
  - Worked with a group of students acting as the project manager.
  - Designed, built and tested a GPS tracking device for children.
  - Using Gumstix and RF transponders logged and transmitted the location of a child.

## PUBLICATIONS:

- Featured as "Brother of Invention" and accomplished researcher in Time, Newsweek and Sports Illustrated magazines by George Mason University, Sep. 2009
- "Voice Recognition Algorithm for Portable Assistive Devices" Sensors, 2007 IEEE, pp.997-1000, Oct. 2007

## WORK EXPERIENCE:

**GEORGE MASON UNIVERSITY** **Fairfax, VA**  
**Graduate Research & Teaching Assistant** January 2007 - Current

- Researched in Neural Engineering and Rehabilitation Technology.
- Tested and developed a Voice Activated Intelligent powered wheelchair.
- Instructed technical laboratories in Communication Engineering, MATLAB, DSP Implementations with Code Composer, Signal Processing and Digital Circuit Design.
- **Technical Skills:**
  - Proficient in MATLAB and LabVIEW programming for real-time processes, data acquisition and signal processing.
  - Programming in C for DSPs and Microcontrollers on embedded systems.
  - Successfully performed engineering research, design and development process.
  - Hands-on experience with soldering, PCB manufacturing and use of oscilloscopes, spectrum analyzers, multimeters and other laboratory devices.

**GEORGE MASON UNIVERSITY** **Fairfax, VA**  
**IT Instructor & Mentor** October 2005 - January 2007

- Mentored and instructed students and teachers on all Microsoft applications.
- Operated and fixed computers, printers and multimedia devices on daily basis.