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GORANG GANDHI

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Permanent Address:
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OBJECTIVE: Seeking a full time position in robotics, controls, or software/hardware design.

EDUCATION

Master of Science in Electrical Engineering **May 2009**

University of Southern California, Los Angeles, California

Cumulative GPA: 4.0/4.0

Bachelor of Science in Electrical Engineering, Summa Cum Laude, Minor in Mathematics **May 2007**

University of Florida, Gainesville, Florida

Cumulative GPA: 3.95/4.0

Honors Thesis: *Koolio: An Autonomous Delivery Refrigerator Robot*

SKILLS: C/C++, Matlab, Linux, Java, VHDL, Protel, Ladder Logic, AutoCAD, Visual Basic, Prolog, Assembly, Vxworks

EXPERIENCE

Research Assistant: Interaction Lab/Computational Learning & Motor Control Lab/RESL August 2007- Present

University of Southern California, Los Angeles, California

- Wrote C code to implement a adaptive controller for a humanoid head platform.
- Implemented several machine learning algorithms in Matlab, which included sparse versions of the Gaussian Process.
- Performed a comparative study of Gaussian Processes, Support/Relevance Vector Machines, and LWPR.
- Implemented an Extended Kalman Filter in Matlab to model disturbances acting on an autonomous boat.

Research Assistant: Machine Intelligence Lab May 2006 - May 2007

University of Florida, Gainesville, Florida

- Worked on an autonomous refrigerator robot, which integrated an LINUX embedded PC, Atmega 128 microprocessor, sonar sensors, compass, web cameras, motors, wireless adapter, and VGA monitor.
- Wrote all of the behavior software in C for obstacle avoidance, PID motor control, and navigation in the hallways.
- Wrote simple vision software for color detection utilizing openCV C++ libraries.

Intelligent Machine Design Lab: Machine Intelligence Lab January 2006 - April 2006

University of Florida, Gainesville, Florida

- Designed an autonomous soda retrieving robot, which integrated sensors, a camera, motors, servos, and Atmega128.
- Designed the robot frame in AutoCAD.
- Created various sensor and auxiliary boards using Protel DXP.
- Wrote all of the software in C to follow a line, obstacle avoid, take a remote control command, and detect colors.

Integrated Product and Process Design August 2005 - April 2006

University of Florida, Gainesville, Florida

- Wrote all the of relay ladder logic sequencing for an Allen Bradley SLC 5/03 programmable logic controller.
- Reverse engineered a wide format EPSON printer to accommodate the system.
- Worked with another team member to create the Visual Basic GUI for the operator of the system.
- Worked with team members to write the software to control the robotic arm.

Control Systems Engineer May 2005 – August 2005

General Electric, Greenville, South Carolina

- Learned the basics of relay ladder logic and its application to PLC code.
- Learned how the MarkV/VI control systems controlled the startup, shutdown, and synchronization of gas turbines.
- Assisted customers/vendors with questions concerning sequencing of the MarkV/VI controller.

System Reliability Engineer August 2004 - December 2004

General Electric, Greenville, South Carolina

- Analyzed newly designed gas turbine systems to determine components causing failures.
- Prepared block diagrams representing the system and executed Monte Carlo simulations to determine reliability.

PUBLICATIONS

- L. Zamstein, A. Arroyo, E. Schwartz, S. Keen, B. Sutton, and G. Gandhi, *Koolio: Path planning using reinforcement learning on a real robot platform*, 19th Florida Conference on Recent Advances in Robotics, May 25-26, 2006.

- S. Keen, A. Arroyo, E. Schwartz, W. Ye, L. Zamstein, B. Sutton, G. Shokes, and G. Gandhi, *Koolio: An Autonomous Refrigerator Robot*, 19th Florida Conference on Recent Advances in Robotics, May 25-26, 2006.

AWARDS/AFFILIATIONS

USC Provost Fellowship; UF Honors Program; Florida Bright Futures Scholarship; W.H. Chen Scholarship; ECE Alumni Scholarship; ECE E-Award; 2006 ASME Manufacturing Design Competition Winner
Member of Tau Beta Pi Engineering Honor Society; Volunteered in SECME 2004
Member of IEEE; IEEE robotic competition team member
Member of Phi Eta Sigma National Honor Society

February 2004 - May 2007
December 2003 - May 2007
January 2003 - May 2007