Shivakeshavan Giridharan

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OBJECTIVE

To obtain a summer position for developing innovative solutions with an emphasis on application of engineering concepts.

EDUCATION

University of Florida, Gainesville,Florida — *Aug 2008 - Dec 2009*
- M.S in Electrical and Computer Engineering
- GPA: 3.83

Anna University, Chennai, Tamil Nadu, India — *Aug 2003 - Apr 2007*
- B.E, Electrical Engineering (First class 70%)
- Ranked third in the department.

COMPUTER SKILLS
- Languages: C, C++, Assembly, Unix Shell Scripts.
- Packages: Matlab, Scilab, LaTeX.
- Operating Systems: Windows, Unix/Linux.
- Web: HTML, Style sheets

ACHIEVEMENTS AND HONORS
- **Among top 8** participants for *Industry defined problems* at the technical festival of IIT Madras, for a presentation on novel ideas for Wireless energy transfer.
- **Awarded** a scholarship in the Lord of the Code 2006 a competition conducted by IIT Bombay & Red Hat, for writing a neural network based handwriting and Optical character recognition program.
- **Elected** as president of electrical and electronics association at college and have organized a national level symposium.
- **Published** a paper in an IEEE Conference on Bio-instrumentation with Neural networks.

WORK EXPERIENCE

Research Associate at IIT Madras — *Jul 2007 - Jul 2008*

Was a Research Assistant in IIT Madras working on the following problems:
- Online handwriting recognition techniques using SVM and neural networks.
- Algorithms for calculating frequency variation from fly pupae heart beating videos.
- Reinforcement Learning based models for arm reaching movements and saccades.
- Have additionally served as a Teaching Assistant.

ACADEMIC AND RESEARCH PROJECTS

FMRI - EEG analysis
- Currently learning how to process and analyze fMRI data in the Neuroscience lab of UF Bio-engineering Dept.

Automated Image Recognition and Target Firing — *Jan 2007 - Apr 2007*
- Designed an automatic scanning turret which recognizes targets using neural networks and automatically fires a laser beam at them using monoscopic distance approximation.
- Awarded **best** project in the entire department.
- Detailed description available at http://kriebo.myftp.org.

Real Time 3D Physics Simulator
- Designed and implemented a mechanical physics and mathematics engine
- Realistic OpenGL rendering for all simulations

Neural Network Library
- Designed and implemented multiple neural network architectures - Feed-forward Back-propagation, Time series, SOMs, etc.
- The above was used in implementing Handwriting and OCR recognition.
- Awarded Lord of the Code Scholarship

Miscellanea
- Implemented feature rich Hyper Terminal program using serial interfacing. Awarded 3rd place in final year school project.
- Developed a unique cryptographic scheme for encryption based on number base keys, with bit swapping.

CO-CURRICULAR ACTIVITIES
- Designed a quiz program for a charitable trust to be distributed to poor and corporation schools.
- Among the top three winners in various events at national level college engineering symposiums.

AFFILIATIONS

Student member of IEEE since 2004