

Sangeeta Kundu

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OBJECTIVE

Seek a graduate assistantship position to augment my analytical and programming skills in the field of image processing and computer vision.

EDUCATION

- **M.S. Computer Science** (Pursuing) University of South Florida. GPA 3.52.
- **B.S. Computer Science** SNDT Bombay University, India. GPA 3.75

PROFESSIONAL EXPERIENCE

- **Teaching Assistant , Computer Science Department. USF** **Jan2003 – May 2003**
Assisted in teaching Software System Development and Programming Concepts. It helped in solidifying the concepts of OOP, UML and Java programming language.
- **Research Assistant, Computer Science Department. USF** **Aug 2003 – Jan 2004**
Developed and tested a system capable of recognizing human beings from their strain/stress maps using Finite Element Modeling in ANSYS. The process involves modeling complex non-rigid motion and yielded an accuracy of **85%**.
- **Graduate Assistant, Geography department, USF St. Petersburg.** **Jan2004 – June 2004**
Worked on a project to determine the groundwater contamination of wells using neuro-fuzzy classifiers. ArcGIS is used to produce various data layers from the raw data which is pulled up from MS-ACCESS database by running report queries. Designed the schema to efficiently store the raw data and run queries to generate the report and training the neural networks (Back Propagation & Radial Basis Functions). Predict, Nefclass-J and NeuScience softwares are used to create and train the neural networks.

PUBLICATIONS

- “Elastic Face, An Anatomy-based Biometrics Beyond Visible Cue”, *Yong Zhang, Sangeeta Kundu, Dmitry Goldgof & Sudeep Sarkar*. 17th International Conference on Pattern Recognition (ICPR).

TECHNICAL SKILLS

- **Languages** C, C++, JAVA, 8085, 8086 Assembly, HTML, ASP, XML, SQL.
- **Scripting** JavaScript, VBScript, PERL, TCSH, BASH, AWK scripting.
- **Platforms** Linux, Unix, Sun Solaris, Windows 9X/2000.
- **Database Systems** MS Access.
- **Packages** VC++, ANSYS (Finite Element Modeling Software), MOTIF, JBuilder, Office 2000, ArcView GIS, PREDICT, NeuScience

PROJECTS

- **A Novel Face Recognition algorithm using Face Elasticity (Graduate Thesis):** Designed a novel face recognition algorithm based on the elasticity (strain) maps resulting from the facial expressions. The maps were generated for around 100 subjects and recognized using Principal Component Analysis after dimensionality reduction. The algorithm is able to recognize the faces with an accuracy of **85%**.
- **Image Processing Software:** Designed an Image Processing Tool in ‘C’ and Motif with implementations for various image processing operations such as filtering (low/high pass), Fast Fourier Transform, Hough Transform, Edge Detection and Face Segmentation.

- **Real Time Nuclear Fusion Monitoring System:** The project was undertaken at Tata Institute of Fundamental Research, India. Designed data structures to store large real time nuclear fusion data which was generated by PELLETRON Accelerator System through particle fusion. Implemented algorithms to present the data over a secure local area network through a web portal system. The system allowed real time modifications of the fusion process parameters and was implemented in C and ASP. Part of a team of 4.
- **Simulation of Routing Algorithms over TCP/IP Optical Networks:** NS-2 network simulator package was used to test a routing algorithm over the optical network.

RELEVANT COURSES

Digital Image Processing, Computer Vision, Theory of Algorithms, Operating Systems, Computer Networks, Machine Learning, Computer Architecture, Software Engineering, Database Systems.

PROFESSIONAL AFFILIATION

- IEEE CS USF, Students' Chapter Webmaster

July2003 - Present