

POOJA NATH

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Objective

To work in a challenging environment in the field of software development

Education

- M.S., Computer Science, **University of Maryland, College Park** Graduation: May 2004
- Specializing in Computer Vision
- B.Tech., Computer Science and Engg., **Indian Institute of Technology (IIT) , Kanpur** 1998 – 2002
- Deans Merit certificate of Academic Excellence at IIT Kanpur, 1999

Experience

Dept. of Computer Science, University of Maryland: Graduate Teaching Assistant 2003-2004
- Design and Analysis of Algorithms
- Computer Graphics

Computer Vision Group, University of Maryland: Graduate Research Assistant 2002-2003
Worked on the Human Identification Project. Analyzed cues from human gait, which tend to be individual-specific, for human recognition. Extracted features from human shape to perform action recognition.

Computer Vision Group, University of California, Berkeley: Summer intern Summer 2003
Worked with a group of 3 people on action recognition. Information from motion was used to determine specific running or walking actions in a football video. My work is an acknowledged contribution in the publication "Recognizing Action at a Distance", by Efros et. al., presented at ICCV '03, Nice, France.

Signal and Image Processing Group, Paris Telecom, Paris: Summer intern Summer 2001
Developed an application for the reconstruction of images from geophysical data sets. Extended this work at IIT Kanpur by using Genetic Algorithms for robust parameter estimation.

Technical skills

Languages: C, C++, Java, Perl, Lisp

Experience in: major operating systems, Matlab, OpenGL

Additional strengths: strong mathematical and analytical skills. Excellent communication and presentation abilities.

Academic Projects

Vision:

- Optimization techniques for Background Modeling of image sequences
- Developed a 3D graphics game for rendering player actions in a real-life setting
- Hindi text extraction from images using Support Vector Machines
- Application for handwriting recognition and beautification

Other areas:

- Developed a Natural Language Processing based system to examine conformities in large sentence data sets
- Designed and implemented a robot motion planning algorithm using probabilistic roadmaps
- Developed a school complaint management system using Rational Rose
- Designed and developed a hotel management system on Oracle
- Team of 3: Implemented searching and indexing of files in Chord (a scalable peer-to-peer lookup service)
- Evaluated various high bandwidth applications over Bluetooth
- Analyzed tcpdump files for various networking packets such as RARP, SYN
- Implemented the scheduler and paging modules in OSP, an OS simulator
- Team of 4: Implemented a Java Interpreter with the help of a bytecode library

References

1. Larry Davis, Professor and Chair, Department of Computer Science, University of Maryland, College Park
2. David Mount, Professor, Department of Computer Science, University of Maryland, College Park