Ajjen Joshi

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Area of Specialization

Computer Vision, Machine Learning, Analysis of spatio-temporal signals associated with human motion and emotion

Education

Boston University, Boston, MA

Ph.D. student, Computer Science *current*

- Advisors: Dr. Margrit Betke and Dr. Stan Sclaroff

M.S., Computer Science Aug 2014

- Topic: *A Random Forest Approach to Segmenting and Classifying Gestures*
- Advisors: Dr. Margrit Betke and Dr. Stan Sclaroff
- GPA: 3.9/4.0

Connecticut College, New London, CT

B.A., Computer Science and Architectural Studies (Double Major) May 2012

- Minor in Mathematics and Certificate in Arts and Technology
- GPA: 3.96/4.0 *Summa Cum Laude*

St. Xavier's School, Kathmandu, Nepal

High School Diploma May 2007

- Rank: 1/108

Honors and Awards

Boston University Research and Teaching Fellowship (2012 - current), Phi Beta Kappa (2012), Architectural Studies Award for Outstanding Senior (2012), Winthrop Scholar, Connecticut College's highest academic honor (2011), Recipient of Keck Research Grant (2010)

Relevant Coursework

Graduate

- Machine Learning, Image and Video Computing, Computer Graphics, Computer Networks, Data Mining, Randomized Algorithms and Computation

Undergraduate

- Web and Mobile Computing, Artificial Intelligence, Multimedia Processing, Database Systems, Graphics and Virtual Environments

Skills

Programming

- Java, Python, C++, Matlab, HTML/CSS, PHP, MySQL, Processing

Other

- **Animation and Motion Capture:** Autodesk Maya, Motionbuilder; Blender; **Design:** Adobe Photoshop, Illustrator, InDesign; **Film:** Adobe Premiere, FinalCut

Research Experience

Multimodal Assessment of Conversational Engagement in Persons with Motor Disabilities

Research Project *current*

- Devising a machine learning framework capable of predicting behavioral engagement scores of people suffering from motor impairments by studying descriptors extracted from multiple modalities (video, audio, text) of persons engaged in conversation.

A Random Forest Approach to Segmenting and Classifying Gestures

Master's Thesis 2014

- Investigated a gesture segmentation and recognition scheme that employs a random forest classifier, obtaining state-of-the-art results in one dataset. Publication submitted.

Developing a Tool for Dance Motion Synthesis

Undergraduate Research Project 2012

- Developed a pedagogical application capable of synthesizing choreography permutations by combining dance primitives recorded via motion capture. Published and presented at the 13th Biennial Symposium on Arts and Technology, 2012.

Teaching Experience

Teaching Fellow

- Image and Video Computing (Graduate course in computer vision) Fall 2014
- Application Programming (Introductory course in programming) Fall 2013
- 3D Game Design (Introductory course in game design) Spring 2013
- Multimedia (Intermediate course in audio and image processing) Fall 2011

Responsibilities:

- Designed, taught and graded lab exercises and problem sets in a variety of languages(C++, Python, MATLAB) and environments(Blender, Maya, Flash)
- Helped develop course content and provided one-on-one mentoring to students
- Guest lectured for Image and Video Computing on object tracking

Work Experience

New London Main Street | New London, CT

Graphic and Web Design Intern Fall 2011

- Involved in various design, web development and event management projects while engaging with members of the downtown New London community.

Connecticut College Center for Arts and Technology | New London, CT

Animation and Motion Capture Technician Fall 2010 - Spring 2012

- Helped students with computer animation projects, and assisted with capturing body motions using an eight-camera motion capture setup.

Brown University | Providence, RI

Student Intern Fall 2011

- Created interactive multimedia installations in Max/MSP/Jitter using the Microsoft Kinect. Advised by Dr. Todd Winkler.

Extra-curriculars

ajjenjoshi.com | Boston, MA

Visual Creative *current*

- Freelance work in art and photography