

CURRICULUM VITAE

Jacob Richard Whitehill

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EDUCATION

Institution: **University of California, San Diego**
Location: La Jolla, California
Degree: **PhD student**, Computer Science and Engineering
Dates: September 2006 - present

Research interests in applied machine learning and automated tutoring systems.

Institution: **University of the Western Cape**
Location: Bellville, South Africa
Degree: **M.Sc., cum laude**, Computer Science
Dates: July 2003 – May 2006

Developed methods to recognize in real time the facial expressions that occur in South African Sign Language. Used Adaboost to classify Haar features for Facial Actions.

Institution: **Stanford University**
Location: Palo Alto, California, USA
Degree: **B.S., with departmental honors**, Computer Science
Dates: September 1997 - June 2001

Completed honors thesis in wireless ad-hoc networks. In particular, developed a method of controlling transmission power to reduce interference between neighboring network nodes while maintaining high data rate.

RESEARCH & ENGINEERING EXPERIENCE

Company: **Machine Perception Laboratory, UCSD**
Location: La Jolla, California
Position: **Research associate** (Sep 2005 – 2006), **PhD student** (Sep 2006 - present)
Dates: September 2005 – present

Designed and implemented experiments on automated face analysis techniques, including face detection and smile detection. Developed improved face detector for our laboratory using WaldBoost sequential decision algorithm, which increased accuracy over previous detector by over 8%.

Company: **Ergon Informatik AG**
Location: Zurich, Switzerland
Position: **Software engineer**
Dates: September 2001 - June 2003

Co-developed and maintained several large object-oriented solutions, including (1) a real-time, Java-based querying and monitoring tool for financial-instrument trading for Credit Suisse Private Banking; and (2) a generic Java-based database client for modifying and querying arbitrary back-end database tables.

Company: **Swiss Federal Institute of Technology (ETH) Zurich**
Location: Zurich, Switzerland
Position: **Research assistant**
Dates: June 2000 – September 2000

Developed method of controlling transmission power to reduce interference between neighboring network nodes while maintaining high data rate. Continued research as honors thesis at Stanford.

Company: **Siemens AG**
Location: Munich, Germany
Position: **Engineering intern**
Dates: June 1999 – September 1999
Developed method of controlling transmission power to reduce interference between neighboring network nodes while maintaining high data rate. Continued research as honors thesis at Stanford.

TEACHING EXPERIENCE

Institution: **Kigali Institute of Science, Technology, and Management**
Location: Kigali, Rwanda
Position: **Lecturer**
Dates: July 2005 - August 2005

Planned and gave lectures, set and marked exams, and bore full responsibility for courses on operating systems and system security. Lectured for 5 hours per day, 5 days per week, for 5 weeks.

Institution: **University of the Western Cape**
Location: Bellville, South Africa
Position: **Lecturer**
Dates: April 2004 - June 2005

Planned and gave lectures, set and marked exams, and bore full responsibility for third-year university computer science courses in operating systems and in automata theory. Also gave guest lectures on Java.

EXTRACURRICULAR ACTIVITIES

Organization: **“Ikamva” Youth Tutoring Program**
Location: Khayelitsha, South Africa
Position: **Tutor**
Dates: January 2004 - January 2005

Tutored small groups (4-12) of South African high school students from economically disadvantaged communities (townships) in mathematics and physics. Also assisted in the administration of the Ikamva program through volunteer recruitment.

Organization: **Educational Studies Program (ESP) at Stanford**
Location: Palo Alto, California
Position: **Vice President, and Teacher**
Dates: April 1998 - June 2001

Administered extracurricular program for San Francisco secondary-school students including over 90 educational weekend workshops and six-weekend courses in diverse subjects. Personally taught courses in UNIX, cryptography, artificial intelligence, and nuclear engineering to classes ranging from 6 to 30 pupils (ages 13-17).

SCHOLARSHIPS

Funding Agency: **Telkom/Cisco Center of Excellence for IP and Internet Computing**
Location: University of the Western Cape, South Africa
Received scholarship and living stipend for two years of Msc study (July 2003 – June 2005), valued at approximately \$6000 per year.

PUBLICATIONS

See <http://mplab.ucsd.edu/~jake>