Avani P. Wildani

CONTACT INFORMATION

1010 Pacific Ave #604 *Voice:* +1 909.437.8626
Santa Cruz, CA, 95060 *E-mail:* avani@soe.ucsc.edu

Objective: Summer Internship: June 2008 through September 2008

EDUCATION

University of California, Santa Cruz, CA USA

PhD Computer Science (ongoing: started September 2007)

Relevant Classes:

Storage Systems, Adv. Operating Systems, **Information Theory**, and Databases

University of New Mexico, Albuquerque, NM USA

MS Computer Science / Machine Learning (May 2007)

Relevant Classes: Advanced Computer Science Courses including -

Machine Learning, Geometric and Probabilistic Methods in CS, **Artificial Intelligence**, Software Engineering,**Computational Biology**,Programming Languages Theory, Computational Linguistics, **Networks**

Harvey Mudd College, Claremont, CA USA

B.S Joint Math / Computer Science (May 2003)

Relevant Classes: Advanced Math and Computer Science Courses including -

Advanced Algorithms, **Scientific Computing**,Graph Theory Computational Geometry, Probability, Differential Geometry

PROJECTS

SSRC
My current research involves assessing the reliability guarantees in Pergamum, an object storage device (OSD) based archival storage system. In the future, I hope to use reputation systems to allow OSDs to automatically police themselves.

MIND Institute
This research involved using fMRI images to detect interconnections within the brains of both healthy and schizophrenic patients. From this, we worked on deriving an efficient technique to perform clustering and hidden variable **Bayesian Structure Search** analyses. I have also used **Support Vector Machines** to obtain a baseline for our other classification methods, and worked extensively with **Spectral Graph Clustering** methods to handle the patients' categorical data.

SLC Project
Research Assistant in the proposal stage of a large scale learning project involving gene expression data from rodents. I modeled the data using **Bayesian Networks** after doing basic clustering for manual parameter selection.

Sandia National Laboratories Clinic
Program Manager of a team working with Dr. Kevin Boyack at Sandia to cluster discrete data points and produce a visualization tool to help with large data-set analysis. I **implemented density clustering** and also researched validity metrics to integrate with the tool we wrote in MATLAB.

WORK EXPERIENCE

Google

Intern **Summer 2006, Summer 2007**
Documented Internal Build System Components using HTML/CSS and Wiki. Studied and documented Code Dependencies in Python, UNIX Shell, and C++ scripts. Used Python to implement statistical techniques to analyze web data.

Center for Educational Network Initiatives in California (CENIC)

Network Operations Engineer / Systems Administrator **Oct 2003 - May 2004**
Configured and supported a variety of **internal solutions** for CENIC's network management. This included limited exposure to **Cisco optical equipment** (15808 and 15540), and the deployment of a complete Cisco VoIP solution for the office. Also **administered 5-7 OS X and Solaris servers** including mail, news, Request Tracker, and Ciscoworks.

University of California, Santa Cruz, CA USA

Research Assistant **March 2008 - present**
Storage Systems research under Dr. Ethan Miller. (see Projects)

University of New Mexico, Albuquerque, NM USA

Research Assistant **Jan 2005 - May 2007**
Machine Learning research under Dr. Terran Lane. (see Projects)

Teaching Assistant **Aug 2004 - Dec 2004**
Lead teaching assistant for **Introduction to Java Programming**. Wrote and graded assignments, Taught Labs, Managed and coordinated with 5 TAs, and maintained the class web site.

Harvey Mudd College, Claremont, CA USA

Research Assistant **May 2002 - present**
IDXP/BEEP **Intrusion Detection** project at Harvey Mudd College, with Prof. Mike Erlinger, Head of the IDWG. Over Summer 2002, we **implemented a functional IDS** using Perl and Java with help from Aerospace and Silicon Defense. Currently, the group is working on making IDMEF an RFC. We also monitor traffic using a modification of the snort tool and NFR and send these alerts into a **MySQL database**.

Computer Science Student Staff **May 2000 - May 2003**
Maintain and Secure several Solaris, Linux, and Windows machines. Used shell scripts and limited experience with SQL databases. Also, **handled networking, managed consultants, and user support**.
- Summer 01 : **Re-structured the entire file-system** using RAID and NetApps.
- Summer 02 : Supervised the upgrading of the entire cluster including gcc and Solaris.

STRENGTHS

I have strong writing and presentation skills. I also have a diverse background as a writer turned mathematician turned computer scientist.
Programming and Markup Languages I use day to day:

Python (including NumPy/Numeric and SimPy), Prolog, MATLAB, LaTeX,
Shell Scripting, XML, HTML.

Programming Languages I have used in a classroom setting:

C, C++ (STL), SML, Java, Lisp, Ciao, Rex, ns2 simulator Tcl

Software and Operating Systems I can use proficiently:

UNIX Utilities, MATLAB, Microsoft Office
Solaris 7-9, Mac OS X, Windows 3.1 through XP, Linux (Ubuntu,Redhat,Debian,etc.)