

Paramveer Singh Dhillon

Department of Computer and Information Sciences

University of Pennsylvania, Philadelphia, PA, USA

e-mail: paramveerdhillon@ieee.org | pasingh@seas.upenn.edu

Homepage: <http://www.seas.upenn.edu/~pasingh>

Room No. 821 Sansom Place East

3600 Chestnut Street

Philadelphia, PA, 19104

Contact No. 1-267-939-4604

Date of Birth: 26th September, 1985

Nationality: Indian

Visa Status: F-1 (Student Visa)

Educational Record:

- **University of Pennsylvania, Philadelphia, PA (Fall 2007-)**
MSE, Computer and Information Sciences.
GPA= 4.0/4.0
Graduate Coursework: Machine Learning, Machine Perception, Computer Architecture
Expected Graduation: May, 2009
- **Punjab Engineering College, Chandigarh, INDIA**
B.Engg. Electronics and Electrical Communication
Percentage: 76.98% (First Division (Honors with Distinction))
Year of Graduation : 2007
- **Senior Secondary School Certificate**
Government Model Senior Secondary School: Sector-16 Chandigarh (CBSE)
Aggregate=83%
Year of passing: 2003
- **Secondary School Certificate**
St. Joseph's High School Chandigarh (ICSE)
Aggregate= 90%
Year of passing: 2001

Research Interests:

Machine Learning, Computational Biology, Computer Vision

Research Experience

- Currently working as a Research Assistant in the ACASA (Ackoff Collaboratory for Advancement of Systems Approach) Lab at University of Pennsylvania under the Supervision of **Prof. Dr. Barry Silverman**. I am working on modeling the behavior and cognition of a village in Middle East, so that we can have greater understanding of the mentality and motivations of insurgents and terrorists.
- Two month stay (Summer-2006) at Computer Vision Center, Barcelona, SPAIN. I worked on a European Union Project HERMES (Human Expressive Representations of Motion and their evaluation in sequences)

Industrial Experience

Internship in Semiconductor Complex Limited (SCL), Mohali, India (May – July 2005). Over the period of two months I worked on developing an Electronic Height Measuring Machine using Microcontrollers and Stepper Motor. Besides this, I also got exposure to the state of the art VLSI design taking part in the complex

Publications

- Published a Technical Report at CVC, Barcelona, Spain **“Real-Time Monocular Face Tracking using an Active Camera”**, July 2006.
- **“A Security System based on Face and Speech Authentication”**, Undergraduate Thesis, Department of Electronics and Electrical Communications Engineering, Punjab Engineering College, Chandigarh, India. **(May 2007)**

Projects (in-progress)

- Doing feature selection in large (biological) datasets and how to enhance feature selection procedures to include 'Genes' which are correlated. The ultimate aim of the project is to find the set of 'Genes' that are most likely to have caused a particular disease.
GUIDE: Prof. Dr Lyle Ungar, Department of Computer and Information Sciences, University of Pennsylvania, Philadelphia, PA, USA

- **Non-Kin Village:** It is a project which involves the simulation and modeling of the behavior and cognition of a Village and how the citizens interact with each other, so that we can have a greater understanding of the mentality of the people and how various factors like Emotional, Financial and Religious interplay and lead to insurgencies and terrorism. This project is sponsored by U.S Department of Military.

GUIDE: Prof. Dr. Barry Silverman, Department of Electrical and Systems Engineering,
University of Pennsylvania, Philadelphia, PA, USA

Projects (Completed)

- **EU-HERMES** (Summer- 2006): Worked on developing algorithms for Facial Feature Detection and Tracking and implemented them on a network of PTZ active cameras. Also developed and implemented the algorithms to control the zoom of PTZ camera for multi zoom activity analysis.
GUIDE: Dr. Jordi Gonzalez, CVC, Barcelona, SPAIN
- **e-Sniffer** (Spring- 2006): It is a human motion following machine which follows a Human (a token). We used Continuously Adaptive Mean Shift to follow the token. The algorithm is implemented using VC++/LUSH.
GUIDE: Dr. (Mrs.) Neena Gupta, PEC, Chandigarh, INDIA
- **e-Car** (Winter- 2005) :Developed an obstacle avoiding robot . It works by processing the images taken by a Webcam fixed on the robot. The images are processed by MATLAB and the PC interface is through a wired Parallel Port Connection.
GUIDE: Dr. Neelam Rup Prakash, PEC, Chandigarh, INDIA
- **LCD Clock** (Autumn-2005): Implemented time Display on an HD-44780 compatible LCD Display by interfacing AVR Microcontroller with Dallas DS-1307 Real Time Clock (Uses I2C Protocol).
GUIDE: Dr. Pankaj Kohli, Semiconductor Complex Ltd. Mohali INDIA
- **Electronic Height Measuring Machine** (Summer-2005)- Implemented the prototype of a Height Measuring Machine based on ATMEL AVR Microcontroller and used a stepper motor to keep track of distance moved.
GUIDE: Dr. Pankaj Kohli, Semiconductor Complex Ltd. Mohali INDIA
- **UART Transceiver** (Summer-2005): Designed a UART Transmitter and Receiver using Verilog HDL.

Programming Skills

- Programming Languages : C (Certification from **TATA InfoTech**), C++, Java (Certification from **TATA InfoTech**), Python, MATLAB, Mathematica, MAPLE
- Other languages: VHDL, Verilog HDL, HTML, VB, VC++, 8085, 8086 Assembly Language, LaTeX
- Operating Systems: GNU/Linux, Windows 95, 98, XP

Extra Curricular Activities

- Received **College Color** for session 2006-2007 for outstanding work as a member and joint secretary of IETE (Institution of Electronics and Telecommunication Engineers).
- Joint secretary of IETE (Institution of Electronics and Telecommunication Engineers) student branch, for session 2006-2007.
- Organized "**Open Circuit**", a circuit design contest at **PECFEST '06** (Annual Technical and Cultural Fest held at PEC, Chandigarh every year)
- Organized "**Pentathlon**", a circuit design contest at **PECFEST '07**
- NSS (National Social Service) volunteer and volunteer for Microfinancing Project for the session 2003-2004
- Won third prize in inter-city Physics quiz conducted by CBSE (Central Board for Secondary Education, INDIA) in 2003

Declaration:

- I hereby declare that the details given above are correct to the best of my knowledge and belief

Paramveer Singh Dhillon

January, 2008