Rohan Chandra

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EDUCATION

Delhi Technological University, New Delhi, India
Bachelor of Technology (B.Tech) in ECE — Aug 2012 – Jun 2016
- Last two years GPA: 80% (Rank in class: 13) ; Cumulative GPA: 64.74%
- Relevant Courses: Computer Architecture, Programming Fundamentals, Digital Image Processing, Soft Computing, Embedded Systems, Digital Systems Design
- Final Semester Courses:Robotics and Object Tracking, Pattern Recognition

Indraprastha Institute of Information Technology, New Delhi, India
(No Credit / No Degree) — Dec 2015 – Jun 2016
- Final Semester Courses: Data Structures and Algorithms, Algorithm Design and Analysis

University of California, Berkeley, California, USA
Summer Program in Economics and Finance — Jun 2014 – Aug 2014
- Cumulative GPA: 3.128 / 4.00

Amity International School, NOIDA, India
Central Board of Secondary Education — Apr 2008 – May 2011
10th Grade GPA: 97.4%
- Recognized by CBSE as top 0.1 % of all successful class 10 board exam candidates
- Ranked 3rd in all of National Capital Region (NCR)
- Interviewed on national television

12th Grade GPA: 82.8%

WORK EXPERIENCE

Mechartes Researchers Pvt. Ltd., NOIDA
Project Design Intern — Dec 2014
- Worked on home automation. Task was to design an electronic solenoid lock based on fingerprint vereification.
- Design is robust and fitted with a biometric module which scans the user's fingerprints. Added a Zwave internet protocol to this design that enabled the lock to interact with the user dierctly by commands sent through a smartphone.
- Mechartes has just released the product into the market at www.oakter.com
- Top scorer out of 195 students in finals for the project presentation at DTU.
- Supervisors: Shishir Gupta

RESEARCH EXPERIENCE

Indraprastha Institute of Information Technology, New Delhi, India
Research Assistant (Future Appointment) — Jan 2016 – Jun 2016
- Will be working on autonomous driving.
- Will use ROS to design computer vision algorithms based on geometric constraints imposed by the scene
- Will be working on pedestrian detection, lane detection and road surface segmentation.
- Supervisors: Dr. Saket Anand
- Research areas: Machine Learning, Computer Vision

Amity University, NOIDA, India
Research Assistant — Aug 2015 – Sep 2015
- Developed a predictive risk model to identify patients that are at high risk of readmission to hospital within 30-days using classification in R.
- Using logistic regression, discovered predictor variables for readmission risk modelling. Developed a logistic regression model used to classify 4218 patients based on their age, gender and diagnosis.
- Using domain knowledge of doctors and from prior data, association rules are derived between variables and readmission for different diseases.
- Research areas: Classification, Machine Learning
- Platforms Used: R, MySQl, Apache cTakes

University of Maryland, College Park, USA
Research Intern — Jun 2015 – Aug 2016
- Worked on the inverse problem of source localization of EEG data.
- Used Fieldtrip, an open source software, to develop algorithms in MATLAB. In the space of 6 weeks, developed seperate models for preprocessing, head, source and volume conduction
- Gained valuable knowledge in algorithmic designing and programming
- Implemented an algorithm based on least square estimation that had a 95-98% success rate in identifying correct source locations.
- Supervisors: Dr. Piya Pal, Dr. Ashok Agrawala
- Research areas: Neural Signal Processing, Compressed Sensing
- Platform used: MATLAB

Delhi Technological University, New Delhi, India
Research Assistant — Jan 2014 – Present

- Improved performance and functionality of notch and all-pass filters and Digital-to-Analog converters by implementing them with Operational Trans Resistance Ampifiers (OTRA). Improvements are in the form of fewer active blocks used and provision of equi-capacitance capability unlike in previous work.
- Developed a novel design for a multi-operational circuit that can be used as both an all-pass and notch filter.
- Second highest scorer in final project evaluation in 3rd year.
- Supervisors: Dr. Neeta Pandey
- Research areas: Active building blocks, Very Large Scale Integration, CMOS Technology
- Platform used: PSPICE

INDEPENDENT PROJECTS

Multiply by 9, 99, 999
Vedic Math, Speed Math, Number Theory — Dec 2014

- Invented a new Vedic Math technique of multiplying numbers by 9, 99 and 999 which has been submitted to Mathematics Magazine (Mathematics Association of America) co-authored with Dr. Arthur Benjamin.

Squaring Made Easy
Vedic Math, Speed Math, Number Theory — Dec 2014

- Invented a new Vedic Math technique of being able to compute two digit squares where the units digit is between 5 and 9. Method is published in Vedic Math online journal.

PUBLICATIONS

4) R. Anurag, N. Pandey, **R. Chandra** and R. Pandey, "Voltage Mode Second Order Notch/All -pass Filter Realization using OTRA", (Submitted)
3) N. Pandey, **R. Chandra**, and R. Pandey, "Design Of Bainter Notch Filter Using OTRA Realisation", (Communicated)
2) N. Pandey, **R. Chandra**, and R. Pandey, "Operational Trans Resistance Amplifier (OTRA) Based R-2R Ladder and Weighted Resistor DAC's", (Communicated)
1) N. Pandey, **R. Chandra**, and R. Pandey, "Design Of Twin T Notch Filter Using OTRA Realisation", (Communicated)

CONFERENCES

2) **R. Chandra**, R. Teja, N. Pandey and R. Pandey "3-Bit Accurate OTRA Based R-2R and Weighted Resistor DAC Configurations" in *2nd International Conference on Recent Innovations in Science, Engineering and Management (ICRISEM-15)*, New Delhi, India Nov 2015.
1) **R. Chandra**, R. Anurag, N. Pandey and R. Pandey "Second Order Delay Equalizer Realization Based On OTRA" in *National Conference on Recent Trends in Communication and Technology*, Haryana, India, Mar 2015.

- Secured 2nd position as Best Paper Presenter.

INDEPENDENT COURSES

Coursera

- Algorithms: Design and Analysis (Stanford)
- Machine Learning (Stanford)
- Learn to Program: The Fundamentals (University of Toronto)

Other

- 18.06 Linear Algebra (MIT OpenCourseware)
- Statistical Learning (Stanford)
- Operating Systems (UC Berkeley)
- EC-413-9 Soft Computing (Delhi Technological University)

TECHNICAL SKILLS

MATLAB, LaTeX, PSPICE, R, Python, Labview, CSS, HTML, VHDL, Verilog

ACADEMIC ACHIEVEMENTS

- Lightening calculator: Ability to mentally compute simple arithmetic operations in my mind within a few seconds.
- At the age of 18, gave the All India Engineering Entrance Exam for entrance to the top engineering schools in India and was placed 5938 out of one million students.
- Participated and represented India in the 3rd International Young Mathematicians Convention in Lucknow, 2008 winning silver medal individually and bronze medal for team.
- Scholarship winner for excellent academics for 6 consecutive years during middle school and high school.
- Selected for exchange program in Germany in 2009 out of 300 students based on proficiency exam
- Cleared the first round at 3rd position in the college level Texas Instruments Analog Maker Competition.
- Started a video blog on speed math which features some of my own invented techniques.

OTHER ACHIEVEMENTS

CHESS

- Selected to play against international grandmasters like Parimarjan Negi and Kateryna Lahno.
- Secured 4th and 5th position in consecutive years in District level tournaments.
- Ranked 91 out of 500 players at state level. (2014)
- Represented my branch in the inter-branch sports festival of college (ARENA) and was placed 4th two years in a row.
- Represented my college in the chess tournament of Odyssey 2015 at IIIT Delhi and placed 18th out of 150 participants.
- Ranked 53 out of 500 players at state level. (2015)

[*CV compiled on 2015-11-18*]