Debasmita Banerjee

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DOB: 08.08.1995   Nationality: Indian   Gender: Female

Education: Techno India Salt Lake, Kolkata, India

B.Tech degree (Applied *Electronics and Instrumentation Engineering)*

7.69 (out of 10) [Semester 1-4]

Higher Secondary marks: 76%

Secondary marks: 95.67% (in science)

Skills:

Languages (computation):	Python, C, R, SQL, MATLAB, PSpice, Html, BASH
Languages:	English, Spanish, Mandarin Chinese, Hindi (national language), Bengali (mother tongue)
Areas of work:	Optical Fiber and communication, Non linear dynamics, Plasma physics, Pattern analysis, Control systems and Circuit analysis, Measurement systems and instrumentation, Computing and architecture
Areas of Interest:	Neurophotonics, Natural pattern formation and dynamics, SEM-EDX technique in forensic science Graphics design, Image processing, Data analysis, Number Theory, Quantum Cryptography, Robotics
Tools experienced:	Git, Photoshop, Autodesk Sketchbook

Professional experience:

Pattern analysis of dodecanethiol capped AuNps (primarily) and intensity graph study
Along with natural pattern (fractals) study feeding non linearity in a linear matrix system,
Study of Swift Hohenberg Equation and KPP equation using MATLAB
(Under Prof. A.N.S Iyenger, Saha Institute of Nuclear Physics):

- Study of Two dimensional network of dodecanethiol capped Gold nano particles(AuNPs) with mixed monolayers of Stearic Acid at the air water interface using Brewster Angle Microscopy and analysis of the pattern formation in the process and intensity measurement using image processing technique(MATLAB)
- Plotting Swift Hohenberg equation Time series and rhomboid and spherical pattern detection
- Study of KPP equation, changing initial conditions study of circles and disc formations. Intensity plotting varying the initial conditions and analyzing the huge variations and detection of linear point in nonlinearity
- Adding non linear diffusivity to a linear matrix and observing the non linear diffusive coherence pattern and generate a comparative study.
- Intensity plot of obtained result converting each point in an array and analyzing the intensity curve
- Realizing Plasma physics and non linear conditions generated in SINP TOKAMAK
- Industrial and Social need of pattern analysis(importance of pattern analysis in DNA structure)

(June 2015-Current)

Imagine the launch campaign of the new Multiroom speaker Launched by Philips in France, 2015:

- Worked with participant from France and conceptualized a marketing idea that created the buzz about the product
- Initially made an agenda with three parts highlighting the decent technical specifications of the Philips Multiroom system, their strengths and consumer benefits.
- Proposed a slogan, a concept poster describing the scenario.
- A video on the product and the presumptive impact of the product among youths.

(April 2015-June 2015)

Workshops:

- Introduction to ethical hacking(By SASLAB, in 2014)
- Certificate of merit for 'iken scientificA'08,2008(Workshop on General knowledge and Social Awareness on recent events)

Course work:

(As part of college degree program)____Core Subjects taken (Sem1-5)
(T: Theory, P: Practical)

1. Analog Electronics   (T,P)
2. Digital Electronics (T,P)
3. Measurement Systems   (T,P)
4. Industrial Instrumentation (T,P)
5. Sensors and Transducers (T,P)
6. Microprocessor Architecture (T,P)
7. Optical fiber and communication (T)
8. Circuit theory and Control systems (T,P)

(As part of college degree program)____Additional Subjects taken (Sem1-5)

1. Applied mathematics(Analysis[real and complex],Transformation, Probability & statistics, Differential Equation, Linear algebra, Calculus, Graph theory)(T)
2. Physics(Classical Physics[SHM, Wave theory], Optics[Diffraction, Polarization, Laser], Classical Mechanics, Quantum Mechanics, Statistical Mechanics)(T,P)
3. Computing And Database Handling (Programming language[C, Python],DBMS[SQL])(T,P)

Online Courses (In collaboration with Coursera):

1. Virology: How Viruses work (Under Professor Vincent Racaniello, Columbia University)
2. Python For everybody(Under Professor Charles Severance, University Of Michigan)
3. Fundamentals of Digital Image and Video Processing(Under professor Aggelos K. Katsaggelos, Northwestern University)
4. The Data Scientist's Tool Box(Roger D. Peng,Jeff Leek ,Brian Caffo,Johns Hopkins University)
5. R programming(Roger D. Peng,Jeff Leek ,Brian Caffo,Johns Hopkins University)
6. Introduction To Forensic Science(Roderick Bates,Nanyang Technological University,Singapore)
7. Chinese for beginners(Xiaoyu Liu,Peking University)

Other Courses:

1. Conversational English From the British Institute

Achievements:

1. First position in Astrophysics quiz held in Techno India, Salt Lake in 2014
2. Third Position in Technological fest EDGE held in Techno Salt Lake for circuit designing held in 2015
3. Seventh Position in State level Art competition, KREATIONIZ, held in 2015
4. First position in national level Essay writing Competition held by Berger Paints in 2007
5. Hand-made poster work presented in SPIE optics+photonics, San Diego 2015
6. Special mention in optics outreach games in SPIE optics+photonics, San Diego 2015

Other:

- SPIE Techno India Chapter Officer (Currently holding Co-secretary post)
- Coursera Post holder (Learner Guide) under Student Coordinator Jade Wang
- Outreach activist, Social work activist (with SPIE and Social Organization 'Help Age India' and 'Red Cross')
[Hobbies:
Traditional and Digital painting (Instagram profile: https://instagram.com/visiondarkdemi19/),
Writing and Blogging (Blog address: http://cynosuredemi.blogspot.in/),
Music (14 years of training in Indian Classical music) & playing guitar
Coding and Crypting, Travelling and hiking]