

Pranjal Goswami

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EDUCATION

Program	Institution	%/CGPA	Completion
B Tech (Hons) in Chemical Engineering	IIT Kharagpur	8.64	2014
Minor in Computer Science & Engineering	IIT Kharagpur	8.83	2014
XII (CBSE)	Sri Chaitanya, Vishakhapatnam(A.P.)	94.80%	2010
X (ICSE)	St. Xavier's Higher Secondary School, Raipur (C.G.)	97.14%	2008

ACADEMIC ACHIEVEMENTS

- Among **top ten students in ICSE 2010** and obtained **national highest score in Physics, CBSE 2012**
- Department Rank 9 among 90 students of the department of Chemical Engineering

INTERNSHIPS/PROFESSIONAL EXPERIENCE

Deutsche Bank CIB Centre, Mumbai

(May – July 2013)

Implied Probability Distribution for CDS Index Options

- Studied the Black Scholes Model and Pedersen Model for Option Pricing
- Formulated the implied probability distribution for index options using Derman's Model for Stock Options
- **Built an excel tool** to generate CDS Index implied probability curve and visual comparison with realised historical curve
- Developed a macro to fetch and cache the spread movements from the financial data repository
- Developed tool is in use by trading team in Australia office for iTraxx Index Options

Project Lead, Synth Labs

(January 2012 - present)

- Project Management and Development of Customer Relationship Management System for F&B Industry
- Developed server framework and database schema for web application, designed user interface for Consumer Tablet Application

ACADEMIC PROJECTS

Indian Institute of Technology, Kharagpur, B.Tech. Thesis

(August 2013 - present)

Monte Carlo Simulation for atomic distribution during alloy formation

Supervisor: [Prof. Parag A. Deshpande](#)

- Modelled formation of solid solution formation for different crystal lattice structures viz primitive cube, BCC, FCC and Tetrahedral
- **Implemented Monte Carlo Simulation in Python** using the Metropolis Algorithm to find the minimum energy configuration

Enzyme active-site isolation from Protein Data Bank information

Supervisor: [Prof. Parag A. Deshpande](#)

- Ideated **Protein Activity Isolator (ProActis)**, a program to isolate atoms in an enzyme molecule lying in a range of active distance
- **Implemented the python-module and created a cloud application** available at <http://qmel.iitkgp.ernet.in/qmel/projects/proactis>
- Currently submitted for publication in Bio-Informatics Journal

EXTRA ACADEMIC PROJECTS

TnPAAlerts – An SMS Alert service (October 2013)	<ul style="list-style-type: none">▪ Ideated TnPAAlerts service that pushes condensed "University Career Development Centre" notices to all subscribers via Text Message.▪ Designed and developed a web application including a calendar for all events parsed from notices and a personalization panel for users to set preferences for SMS subscription▪ The app caters over 600 paid subscribers out of 1400 students while the calendar service is available to all users and generated a profit of INR 25,000 [[Screenshots]] [[Link]]
Erudito (Open Soft 2013, IIT Kharagpur) (March 2013)	<ul style="list-style-type: none">▪ Part of the team that developed a Windows application to browse, bookmark and save scientific literature from online sources.▪ Developed the GUI for WPF Application using Expression Blend on XAML and C#
Jyukebox – Online Music Player (August 2012)	<ul style="list-style-type: none">▪ Developed a web scrapper to fetch all song metadata from www.songs.pk and stored in a MySQL DB▪ Designed the UI for web browser MP3 playback using HTML5 and Javascript with search features.▪ The site has over 35000 Bollywood songs and options to create and save playlists, mark songs as favourite etc and is live at http://jyukebox.netne.net
Moneycare – Portfolio Management System (March 2012)	<ul style="list-style-type: none">▪ Developed a web platform for registered clients to view their investments in a condensed form▪ Used D3.js for plotting charts for analytics. Included calendar view for upcoming renewal alerts▪ Designed and developed the administrator panel for moderation [[Screenshots]] [[Link]]
RP Hall Mess Card System (March 2012)	<ul style="list-style-type: none">▪ Developed a web platform for users to select their menu preferences online and manage monthly expenses on food.▪ Ideated and developed application using PHP and MySQL for use of RFID cards by users to be used in mess every day.

INITIATIVES

Founder, [Greek Turtle](#)

(October 2013 - present)

Freelance Application Development

- Created **Intaglio Smart Event**, online event manager for annual management fest of Indian Institute of Management, Calcutta
- Working on development of **Inscribe**, an online platform for micro-publishing literature on PHP/MySQL

POSITIONS OF RESPONSIBILITY

Manager, [Entrepreneurship Cell, IIT Kharagpur](#)

(September 2012 - present)

- Head of Publicity Media Design and Web, led a team of 7 members
- Built and offered support for Entrepreneurship Cell Web Applications and online events viz StartIn, Tag'em all

Team Captain, [Open Soft, RP Hall of Residence](#)

(July 2013 - present)

- Responsible for heading this year's team of RP Hall for Open Soft, an inter-hall event for software development held annually.

SKILLS

- PHP, C, Javascript, Python, C#, Ruby, Objective C
- Database Management – MySQL
- OpenSource Frameworks – Bootstrap, jQuery
- Microsoft Excel – VBA Macro building
- Adobe Photoshop, Adobe Dreamweaver, X-Code
- Operating Systems – Windows, Linux, Mac OS

EXTRA-CURRICULAR ACTIVITIES

- Qualified for **Pilot Aptitude Battery Test** organized by the National Defence Academy in 2010
- **Won** the TATA Steel Quiz Competition and represented Chhattisgarh State in TATA CENTENARY NATIONAL QUIZ COMPETITION, '08
- First prize in state level debate organized by **JCI** – Chhattisgarh in 2008

Music

- Won individual and group medals in Inter-hall Entertainment events in IIT Kharagpur for playing Hindustani Classical Sitar
- Awarded **Badhwar Cup 2010** for excellence in Music and Technology Events at IIT Kharagpur