AVIKALP KUMAR GUPTA CSE, IIT Kanpur

EDUCATION

Examination	Year	University/Board	%Marks/CGPA
B.Tech (CSE, IIT Kanpur)	2016 (Expected)	IIT Kanpur	7.6
12th(Sr. Secondary, AISSCE)	2012	CBSE	93%
10th (Secondary, AISSE)	2010	CBSE	9.6 / 10

SCHOLASTIC ACHIEVEMENTS

- Achieved ALL INDIA RANK 99 in IIT-JEE 2012
- Secured AIR 175 in KVPY scholarship exam (2012)
- Secured AIR 29 in ResoSTaRT'12 among 80,000 participants
- Received Top 1% certificate in IPhO 2011.

SUMMER INTERSHIPS

Summer Analyst, GOLDMAN SACHS

May-Jul'15

Minimized Risk-weighted Assets (RWAs) for the company by making the allocation optimizer aware about it

- Enhanced the internal engine which recommends collateral allocation to secured funding trades to account for trade-offs between liquidity considerations (liquidity of collateral allocated) and capital considerations (RWAs).
- Quantified the cost savings for the firm if the collateral was allocated to the trades based on the enhanced engine. Skills Earned: Scalable programming in functional languages, Introductory knowledge in Finance

Backend Developer, Pariksha.Co (Educational Startup focused on Mastery based Adaptive learning) Apr-Jul'14

- Project Chameleon: Thoroughly studied the mastery-based adaptive learning model of Khan Academy and implemented an algorithm apt for the preparation for competitive examinations (Skills Earned:- CakePHP, PHP, MySQL, Git, OOPS)
- Gamification (Integration with Backend): Integrated the adaptive backend model with the Gamified user interface using AJAX and self-created APIs in CakePHP and JS (Skills Earned:- HTML+CSS, JavaScript + JQuery, AJAX (using JSON encoding)
- Database Designing: Worked in a team of 3 to make architectural changes in database to extend the functionality of platform so that users can prepare for multiple competitive exams (Skills earned: Database Architecture Proficiency)
- Sales and Product Pitching: Convinced 97 of 120 students to join the SaaS based platform

UNDER-GRADUATE PROJECT

Visual motion planning of multiple robots in 3D — *Dr. Amitabha Mukherjee (CSE, IIT Kanpur)* Aug'15-present Working on extending a project on visual motion planning of multiple robots in 2D to 3D. Motion planning is done using large scale manifold technique. Currently we are using V-rep software and API for 3-D modelling and manifold generation.

ACADEMIC PROJECTS

- **Perl to x86 cross-compiler on Python** *Dr. Subhajit Roy (CSE, IIT Kanpur)* Jan-Apr'15 Generated a cross-compiler of Perl scripting language to x86 assembly language in Python, using Lex and Yacc construction tools of PLY python library, with a more precise and robust error reporting than the interpreter available online
- **Demand predictor for renting bikes** *Dr. Harish Karnick (CSE, IIT Kanpur)* Jan-Apr'15 Experimented with different kinds of regression and classification models in R for predicting the bike renting demand, according to the problem statement on Kaggle, and analyzed the practical aspects & applicability of these models
- Course Management System for Academic Institutions Dr. Arnab Bhattacharya (CSE, IIT Kanpur) Oct-Nov'14 Developed a secure course management website facilitating online quizzes & assignments with automatic grade evaluation
- Car simulator game in C++ using OpenGL Dr. Vinay Namboodiri (CSE, IIT Kanpur) Aug-Nov'14 Created a first-person car simulator game using OpenGL library in C++. Implemented features include imported .3ds objects, Blinn-Phong lighting, textures, camera navigation, heads-up display (HUD) and variable specs for different cars
- **DOMjudge project** ACA (Association of Computing Activities), CSE, IIT Kanpur Ian-Mar'13 Added features to the programming contest website like portal for queries with the judge and a server-synchronized clock

POSITIONS OF RESPONSIBILITY

- Techkriti'15: Coordinator, Software Corner. Responsibility of the event Chaos (esoteric language coding competition):
 - 1. Designed problem statements apt according to the difficulty level of the esoteric language and the time-limit
 - 2. Decided test cases which test the correctness and robustness of the solution
- Summer Sports camp'13: Captain, Football team. As the leader of 15 players in the football camp:
 - 1. Coordinated with the Games & Sports Council (Students' Gymkhama) and other sports teams, for facilities & equipment
 - 2. Assisted Football coach in improvement of trainee performance by off-field motivation and in-match guidance