Apoorv Agarwal

Chemical Engineering
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UG Third Year (B.Tech)
Indian Institute of Technology, Bombay
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Examination	University	Institute	Year	CPI/%
Graduation	IIT Bombay	IIT Bombay	2012	7.29
Intermediate/+2	CBSE	MSMS Vidyalaya, Jaipur	2008	86.20
Matriculation	CBSE	MSMS Vidyalaya, Jaipur	2006	88.60

ACADEMIC HIGHLIGHTS

- Secured All India Rank **793** in IIT-JEE 2009, among **over 4.5 lakh** candidates nationwide (**top 0.2%**)
- Secured All India Rank **1225** in AIEEE 2009, among **over 10 lakh** candidates nationwide (**top 0.1%**)
- Singapore International Airlines (**SIA**) **Youth Scholarship Program** 2007 (**50 candidates** selected nationwide)

PROFESSIONAL CERTIFICATIONS

- Pursuing the **Professional Risk Manager** (PRM^{TM}) designation offered by the PRMIA organisation
- Completed the **Certified Financial Planner** (CFP) Certification by **FPSB**. CFP in the following **7 fields**:
  - ➢ Risk Analysis
  - ➢ Insurance Planning
  - ➢ Retirement Planning
  - ➢ Estate Planning
  - ➢ Investment Planning
  - ➢ Employee Benefits
  - ➢ Tax Planning
- A **NSE Certified Market Professional** (NCMP) **Level 4**, completed **12 NCFM a**nd **3 NISM** series modules

INDUSTRIAL EXPERIENCE

- **Mckinsey and Company,** Gurgaon   [Dec'11]

  Project: Credit Risk Scoring: Probability of Default (**PD**) **Prototype Generation Tool** using **Excel/VBA**
  - ➢ **Increases efficiency** of prototype development **by 3000%** (**2-3 days** compared to 3 months previously)
  - ➢ The **first prototype** has been developed by the tool and implemented for a **bank in Singapore**
  - ➢ The tool also **checks for deviations of excel calculations** from **SAS** (Statistical Analysis System software) by importing **SAS data** of **over 4000 clients** to generate PD scores by **1932 distinct variables**
  - ➢ **Exposure at Default** (EAD) and **Loss Given Default** (LGD) prototype generation tools are under construction using the codes and empirical layout of the PD tool

- **State Bank of India (SBI) Funds Management Pvt. Ltd.,** Jaipur   [Dec'10]

  Project: Performance of Indian **Mutual Funds** vs. their **Style Benchmarks**
  - ➢ Conducted a **Return Based Style Analysis** of **96** Indian equity mutual funds
  - ➢ Implemented the **quadratic optimization** of **11 mutually exclusive asset class** factor models
  - ➢ Compiled **5 years of data** from the '**Alpha**' and '**Prowess**' databases of the **CMIE**

  Case Study: Performance of Indian Equity **Mutual Funds** in a **Bear Market** (1998-2002)
  - ➢ Canvassed **269 open-ended schemes** for computing various performance indices
  - ➢ **Concluded** that **58 funds** provided better returns even in a bear market, some funds provided excess returns

- **GlaxoSmithKline Pharmaceuticals Ltd.,** Nashik   [May'11-June'11]

  Project: In-house **machine development proposals**
  - ➢ **Vacuum system** proposal for Scorpio tablet machine **with 4 site engineers**, **better quality control** upto **6%**
  - ➢ **Turn-table mechanism** for 2 line packing suites to **increase operator efficiency by 15%**

Project: **Work Study** on Eltroxin 100 mcg: Effort to **Increase Operator Utilisation** in Manufacturing

- ➢ Conducted **Maynard Operation Sequence Technique** (MOST) method analysis on the **entire manufacturing and packaging suite**, by **compiling a 60 day datasheet** recorded by me
- ➢ Extended the MOST analysis to the **employee register data** collected for the past **2 years**
- ➢ Created benchmarks for time measurement units (**TMU**s), suggested a **better operator allotment scenario**
- ➢ Initiated a **year-long assessment project** on the Eltroxin manufacturing and packaging suites

- ▪ **Oil and Natural Gas Corporation (ONGC) Ltd.,** Mumbai   [June'10]

  Project: Design of Oil Handling Systems: Gas-Liquid and Liquid-Liquid Separators

  - ➢ Assisted in the **sizing a three-phase horizontal separator** for oil and gas separation, developed in-house
  - ➢ Suggested the **installation of baffle plate inlet diverters** to control re-entrainment and emulsifying problems

- ▪ **SEAROC Cancer Center, S.K. Soni Hospital,** Jaipur   [May'10]

  Project: Clinical Trials on Bioavailability of Chemotherapeutic Agents in Cancer Patients

  - ➢ Reported the **effects of anti-cancer drugs** and molecules, their half-life and side-effects on patients

TECHNICAL SKILLS

Programming Languages: VBA, C++, C, Java, Python, HTML

Software Proficiency: MS Excel, Scilab, Matlab, Eclipse

POSITIONS OF RESPONSIBILITY

- ▪ **Music Secretary** of Hostel – 9, IIT Bombay   [2010-11]
  - ➢ Recipient of the Hostel **Organisational award** and **Performance Arts Festival** (PAF) **colour**
  - ➢ Led the hostel to grab **2nd position** in the inter-hostel Music General Championships (among 14 hostels)

- ▪ **Table Tennis Team Captain**   [2005-07]
  - ➢ Team reached the CBSE Table tennis **State finals** with me as captain   [2006-07]
  - ➢ **Won 2** and **runner-up** in **1** Indian Railways State Table tennis competitions

- ▪ **School Editor,** M.S.M.S. Vidyalaya, Jaipur   [2004-05]
  - ➢ **Initiated the publication** of the monthly paper and quarterly school report, **distributed among 700 students**

COURSE PROJECTS

- ▪ Devised a simplified **model** for Ethanol preparation using **Scilab** for **parameter determination** and **simulation**
- ▪ Fabricated a Class D **Audio Amplifier** using a **comparator**, **MOS**-**FET** and **wave oscillators**
- ▪ Devised **algorithms** to calculate solutions of differential equations by orthogonal collocations using **Scilab**
- ▪ **Team leader** of **5**, overall **team of 40** students for classification and consolidation of **fingerprint data by C++**

EXTRA-CURRICULAR ACTIVITIES

- ▪ Member of the **National Service Scheme** (NSS) group, IIT Bombay
  - ➢ provided **free tuition** to poor children with the group as a **member of Abhyasika**
  - ➢ went to **2 villages for social service** as a member of the **Group for Rural Activities** (GRA)
- ▪ Member of the **Disha Organisation**, Jaipur ~ often went to **teach a school** in a rural area (Jagga ki Baawadi)
- ▪ Amateur **HAM operator** as a member of the **HAM Club** of IIT Bombay