



Devdeep Ray
Computer Science & Engineering
Indian Institute of Technology Bombay
Specialization: Computer Science and Engineering

120050007
UG Second Year
Male
DOB: 24/02/94

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2014	9.69
Intermediate/+2	MSBSHSE	Pace Jr. Science College, Powai	2012	94.18
Matriculation	ICSE	Pawar Public School, Bhandup	2010	94.80

Academics

- Secured **All India Rank 13** in IIT-JEE out of 4,80,000 candidates (2012)
- Awarded **AP grade** in Computer Programming and Utilization
- **AA grades** in 10 out of 13 remaining courses
- Attended **VIJYOSHI** camp at IISc, Bangalore (2011)
- Certificate of Merit for being in **top 1%**, National Std. Exam in Physics (2011)
- Secured a position in state **top 1%**, National Std. Exam in Chemistry (2011)
- International rank 168, **State rank 1** in International Olympiad of Science (2009)
- Secured **All India Rank 22** in NSTSE conducted by Unified Council (2009)
- Pursuing a **minor in Electrical Engineering**

Scholarships

- Offered **INSPIRE** scholarship for securing a position in **top 1%** of +2 exam (2012)
- Awarded **KVPY** (Kishore Vaigyanik Protsahan Yojana) scholarship (2011)

Projects

- **Ray tracer** (2013)
Guide: Prof. Amitabha Sanyal
 - Worked in a team of two to build a feature-rich ray tracing system in Scheme
 - Implemented CSG to render complex solids from primitives
 - Implemented stochastic anti-aliasing, depth of field and soft shadow rendering
- **Functional graphics library** (2013)
 - Wrote a functional sprite based graphics library with turtle like commands
 - Can be used to teach functional programming via turtle graphics examples
- **Android application for low cost Aakash tablet** (Ongoing)
 - Developing a campus events notifier application in a group of 5 students
- **Active suspension** (2013)
 - Did the project under Institute Technical Summer Projects
 - Built a feedback based active suspension system for one wheel which can be generalized for four
- **Aquarium simulator** (2012)
Guide: Prof. Abhiram Ranade
 - Lead a team of 3 and built an aquarium simulator using 'simplecpp' library
 - Implemented life cycle of fish and a day night cycle
 - Realistic water surface and fish motion animations

Interests

- Algorithms and data structures
- Algorithm design and graph theory
- Functional programming
- Discrete optimization techniques
- Digital electronics and logic design
- Concurrent programming
- Computer graphics

Skills

- Programming languages: C++, Java, Python, PLT-Scheme, SWI-Prolog, Scilab
- Web languages: HTML, JavaScript
- Micro-controller programming (Arduino, AVR)

Courses Undertaken

- | | |
|------------------------------------|---|
| • Computer programming and Util | • Discrete Structures* |
| • Introduction to Calculus | • Data Structures and Algorithms + Lab* |
| • Modern Physics | • Digital Electronics* |
| • Introduction to Economics | • Introduction to E&E Engineering* |
| • Abstractions and Paradigms + Lab | • Experimentation and Measurement Lab* |
| • Data Analysis and Interpretation | • Logic Design + Lab** |
| • Linear Algebra | • Automata Theory and Logic** |
| • Differential Equations | • Design and Analysis of Algorithms** |
| • Chemistry | • Software Systems Lab** |

**To be completed by December, 2013*

***To be completed by April, 2014*

Positions of Responsibility

- **Secretary for Computer and Web affairs**, Hostel 5 IIT Bombay (2013-2014)
- **Head boy**, Pawar Public School (2009-2010)
- Represented India in an **exchange program with Europe** under EUMIND (2010)
- **Techfest** organizer (2012)

Extra Curricular Activities

- Built an RC car for XLR8, a competition for freshers (2012)
- Built a **PID controlled line follower** using a 5 sensor array on arduino
- Passed **Trinity Guildhall** exams up to grade 5 for Electronic Keyboard
- **Distinction in 4th grade music theory** conducted by ABRSM, London
- Rhythms Talent fest 1st prize (2006) and 2nd prize (2009) for Electronic Keyboard
- Poem composed for event '**Celebrating human(e)ity**' selected for publication
- **1st prize** for presentation on magnetic levitation in Tech Talk by magictree (2010)
- **Second position** in Eco-quiz held by PEAS (2010)