Divyanshu Grover | **143050019**
Computer Science & Engineering | **M.Tech.**
Indian Institute of Technology Bombay | **Male**
Specialization: Computer Science and Engineering | **DOB: 22 March 1993**

Examination	University	Institute	Year	CPI / %
Post Graduation	IIT Bombay	IIT Bombay	2016	8.48
Undergraduate Specialization: CSE				
Graduation	Panjab University	UIET	2014	8.55
Intermediate/+2	CBSE	AKSIPS	2010	87.80
Matriculation	CBSE	AKSIPS	2008	92.20

Major Research Projects and Seminar

- **Special Effects animation using a video database**
  Master of Technology seminar + thesis project, Adviser: Prof. Parag Chaudhuri, Nov 2014 - Ongoing
  - Problem statement: Traditional hand-drawn animators take roughly one full day to draw one frame with high detail of special effects. Even for computer generated animation, the amount of computation used is expensive and takes a lot of time to model.
  - Solution Approach: We have proposed a solution that is simple enough for both hand-drawn animators and computer animators. We use a video database to get the detail of the scene and apply it to the style of the sketches given to us to automatically generate a complex animation in a short period of time. The videos are matched based on the object's and splash's properties. Motion graphs are used to transition from one video to another seamlessly to produce more varying and realistic animations.
- **Cornell Box using Pixar's Renderman**
  Advanced Computer Graphics Course Project, Adviser: Prof. Parag Chaudhuri, Mar 2015 - Apr 2015
  - We have used Pixar's Renderman to re-create the Cornell Box scene. For this we have defined custom lights and surfaces to exhibit effects such as Color Bleeding, Refraction, Soft Shadows, etc.
- **Adapting Motion Capture Data to animate 3D models in OpenGL**
  Advanced Computer Graphics Course Project, Adviser: Prof. Parag Chaudhuri, Jan 2015 - Feb 2015
  - We have used freely available motion capture data files to animate the Transformers scene we created as a part of the first project. This involved matching the hierarchy and joint structure of the Transformer, and then creating methods for rendering the animation.
- **Empirical vs Simulation Analysis of a Client-Server system performance**
  Perf. of Networks Course Project, Adviser: Prof. Varsha Apte, Jan 2015 - Apr 2015
  - We have analyzed a client-server system first using empirical analysis and then by simulating the same system. We have then compared the efficiency of the simulation with the empirical analysis.
- **Short Animation Movie based on Transformers using OpenGL**
  Computer Graphics Course Project, Adviser: Prof. Parag Chaudhuri, Jun 2014 - Nov 2014
  - In this we first modelled our Transformer using different surfaces and basic structures in OpenGL. We then rendered them to a scene, and added capability of transforming it into a car. Finally we added code for animating the Transformers using keyframe based animation.

Achievements

- Participated in Microsoft's code.fun.do Hackathon held at IITB in 2015.
- Secured All India Rank 54 among 1,55,110 candidates in Graduate Aptitude Test in Engineering (GATE), CSE 2014.
- Secured 108th national rank in NIIT Aptitude Test (NIITAT) 2013 and won a congratulatory letter from Vishwanathan Anand for the same.
- Secured 1st position in National IQ Test organised by Surya World in 2009.
- Secured 2nd position in Science Olympiad organised by A. K. Vidyamandir in 2008 and won a cash prize as well.
- Secured 450th international rank in International Maths Olympiad organised by Science Olympiad Foundation in 2008.
- Secured 378th national rank in National Science Olympiad organised by Science Olympiad Foundation in 2007.

Areas of Interest

Computer Graphics, Animation, Gaming, Image Processing, Computer Vision, Algorithm Design

Professional Skills

Programming Languages	C++, C, Python, Java, bash, SQL, MATLAB, Octave, HTML, CSS, XML, LaTeX
Operating Systems	Linux, Windows, Android
Tools and Frameworks	Adobe Photoshop, OpenFrameworks, OpenCV, .Net Framework, Visual Studio, Android Studio, Netbeans, Eclipse, Vim, Emacs, Adobe After Effects
Soft Skills	Infosys Campus Connect Certification

Positions of Responsibility

- Student Companion for Institute Student Companion Programme during Jun 2015 to July 2016
  - Managed an incoming batch size of 1250+ students for a span of three days as a team of 220 students.
- Graduate Teaching Assistant for Computer Programming and Utilization from Jan 2015 to May 2015 under Prof. Kavi Arya
  - Responsibilities included Q&As, exams evaluation and conduction, grading code, and Moodle forum administration.
- Graduate Teaching Assistant for XDa-Ta Project from July 2014 to Nov 2014 under Prof. S. Sudarshan
  - Assisted in the development of codebase and documentation for the XDa-Ta Project headed by Prof. S. Sudarshan

Extra Curricular Activities and Interests

- Won **Silver Medal** in Chess for PG CSE Team in IIT Bombay in 2015.
- Played Badminton for PG CSE Team in IIT Bombay in 2014.
- Helped organize Goonj, the annual fest of UIET, as a member of Rotaract Club of UIET for the year 2012-13.
- Participated in Under-13 Chess Championship in 2004 and Under-17 Chess Championship in 2008.
- I love solving puzzles and watching animated movies.
- Other interests include playing guitar, trekking and cooking.
- I also actively follow tech articles and magazines like Digit and Chip.