

# UTTAM GRANDHI

## Address

#315 East Hampton  
Jersey City, New Jersey  
USA - 07301

## Contact

ug251@nyu.edu  
+1-917-618-5794

## EDUCATION

**Master of Professional Studies**, Interactive Telecommunications Program  
New York University, USA, Tisch School of Arts  
9/2013 - current  
Look forward to creating large scale interactive sculptures / installations.

**Master of Science + Bachelor of Engineering ( dual degree )**, Physics + Mechanical Engineering  
Birla Institute of Technology & Science, Pilani,  
8/2005 - 6/2010

## ACHIEVEMENTS

*Michelangelo, sketching robot won a silver medal at ROBOGAMES, San Francisco, California, 2009*

Responsibilities included Design, Manufacturing & Assembly. ( Team of 2 )

*Cyborg, mixed media sculpture, won a bronze medal at ROBOGAMES, San Francisco, California, 2009*

*WALL-E, dancing robot, secured 1 st position at TECHFEST, Annual technical festival of IIT-Bombay, 2009*

Responsibilities included Design, manufacturing, assembly, painting & logistics. ( Team of 2 )

*Secured 3rd position out of 50+ teams in the event "Fire n Ice", hover craft racing competition at SHAASTRA, Annual technical festival of IIT-Madras , 2007*

Responsibilities included Design, manufacturing & logistics. ( Team of 5 )

*Chi-Robot, A 6 DOF Manipulator, has been declared as one of the 10 finalists out of 80+ teams in "Get A Grip" at SHAASTRA, IIT-Madras, 2008*

Responsibilities included Design, manufacturing, assembly & logistics. ( Team of 3 )

*Biped, An 8-DOF Biped participated in the final round of the International Legged Robot Competition at TECHFEST, IIT-Bombay, 2009*

Responsibilities included Design, 3D printing, assembly & logistics. ( Team of 4 )

## PROJECTS

### Development of a 3 DOF sketching robot

Birla Institute of Technology and Science, Pilani

Self

Project Student

Designed & fabricated a sketching robot that delineates portraits by drawing curves ( under the guidance of Dr. B. K. Raut., Associate Professor )

### An extensive study on aspect ratios of RIE profiles on single crystal silicon

Central Electronics Engineering Research Institute, Pilani

Self

Project Student

Proposed a novel fluid dynamic model to explain the phenomenon of Reactive Ion Etching (RIE) - Lag in deep etching ( under the guidance of Dr. G. Eranna, Scientist 'F' )

### **Dry Etching Techniques**

Central Electronics Engineering Research Institute, Pilani

Self

Project Student

Etched a unique square spiral pattern using RIE on a 2-inch single crystal silicon wafer. Also performed photolithography and characterization using Optical Microscope and Scanning Probe Microscope ( under the guidance of Dr. G. Eranna, Scientist 'F' )

### **Design of a 6 DOF robotic arm**

Birla Institute of Technology and Science, Pilani

Self

Project Student

Designed & fabricated an industrial class manipulator that can maneuver obstacles to pick objects of different shapes and sizes

## **THESIS**

Learning Based Approaches for Visual Control of Redundant Manipulators, IIT-Kanpur, 2010  
( under the guidance of Dr. Laxmidhar Behera )

- Calibrated the robot's visual space using Tsai Camera Model
- Simulated and performed learning experiments on a 7-DOF robotic arm

## **WORK EXPERIENCE**

### **Intern**

National Thermal Power Corporation Ltd., Ramagundam

5/2007 - 7/2007

- Researched the functioning of steam bypass lines and digital control & monitoring systems
- Gained insights on industrial operations, instruments, maintenance & functioning of a Power Plant

### **Intern**

Larsen & Toubro, Coimbatore

7/2009 - 12/2009

- Performed Value Stream Map analysis for the processes of a 5-axis vertical milling center
- Implemented Lean Manufacturing concepts like Five S, Kanban and Poke-Yoke in CNC Machine Shop

### **Designer**

Artoo, Bengaluru

4/2011 - 1/2013

- Created a website from scratch using HTML5, CSS3 and JQuery
- Completely revamped the UI of the web application using HTML5, CSS3 and JQuery
- Implemented elegant visualizations using Backbone.js , d3.js and Google Maps API
- Illustrated numerous graphic elements for the Web and Android
- Established an internal standard for documentation and iterative development of a website
- Created animated videos using Photoshop & After Effects
- Designed and Illustrated promotional bookmarks, brochures and stickers

## SKILLS

### **Manufacturing**

Sculpting, Drilling, Sawing, Bandsaw, Power tools.

### **Web**

HTML5, CSS3, Javascript

### **Design**

PTC Pro Engineer / Creo, Adobe Photoshop, Inkscape

## PUBLICATIONS

*Design of a Robotic Accessory for Abdominal Surgery* - Dr. R. Bhavani Rao, Uttam Grandhi  
Hamlyn Symposium on Medical Robotics, 5/2010

*Michelangelo: A 3-DOF Sketching Robot* - Ravi Shankar Ippili, Uttam Grandhi, [et.al]  
International Conference on Robotics and Intelligent Sensors, 3/2010

## TALKS

*Introduction to Data Visualization and Processing* - Uttam Grandhi  
The Fifth Elephant, 7/2012  
<http://goo.gl/0uYg4q>

## PERSONAL

<b>Gender</b>	Male
<b>Date of Birth</b>	9/11/1987
<b>Marital Status</b>	Single
<b>Nationality</b>	Indian
<b>Languages</b>	English, Hindi, Telugu
<b>Hobbies</b>	Paper Engineering, Sketching in Graphite/Charcoal

## EXTRA CURRICULAR ACTIVITIES

- Visualized a microphone's input using processing at Digital Organic, A pool organized by Lucid [<http://goo.gl/tuOt0>], 2012
- Member, Lucid ( A studio for speculative art ) [[lucid.net.in](http://lucid.net.in)]. Analyzed artistic texts in the areas of New Media and Design, Bangalore, 2012
- Senior Core Member, Creative Activities Club, BITS-Pilani. Majorly contributed to 20" x 20" sketching & painting panels for Oasis 2007, 2008. Exhibited digital works, paintings & sculptures for "Galleria" during Apogee 2007,2008
- Publicity Co-ordinator, Andhra Samithi, BITS-Pilani. Designed and implemented innovative methods of advertising using print media for various cultural programs, 2007.
- Joint Co-ordinator, BITS Physics Society. Designed posters and organized events during APOGEE, 2008.