

Gowtham Kuntumalla

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TECHNICAL & MANAGEMENT SKILLS

- **Software:** MATLAB, SolidWorks, ANSYS Mechanical, AutoCAD, 3D Printing, PhotoLithography
- **Programming :** Python (+ Machine Learning), C++, HTML, Linux Shell, \LaTeX
- **Misc.:** Project Management, Prototype Fabrication, Manufacturing Techniques, Financial Investing

PROJECTS

- **Metal Polymer Hybrid Heat Exchanger System** **Aug, 2018 – Current**
Mentors: Prof.Placid Ferreira & Prof.Sanjiv Sinha, UIUC - Design and Manufacturing
 - Conceptualised the design stage and spearheading the execution of manufacturing plan of action
 - Created CAD models and currently fabricating a custom manufacturing setup for production
 - Performing Thermo-Mechanical characterisation of specimens made of Copper-Kapton under a variety of test conditions
- **Wearable and Non-Invasive Glucometer** **Jan – May 2018**
Product Oriented Project guided by Prof.B Ravi, IIT Bombay - Led a team of 4
 - Developed a compact prototype that measures epi-skin glucose painlessly via Diffuse Reflectance Infrared Spectroscopy
 - Delivered Proof of Concept (PoC) with good correlations to commercially available pricking based glucometers
 - Received critical acclaim and accolades from the top doctors of Mumbai in a medical device expo
- **2D Particle Image Velocimetry (PIV)** **April – June 2016**
Programming Project, Guide Prof.Amit Agrawal, IIT Bombay - Scientific Computing
 - Implemented a computer code on C++ which is $\approx 100\%$ faster than similar software on MATLAB. It performs the 2D digital evaluation of flow velocity using FFT routine of Cross Correlation

PROFESSIONAL EXPERIENCE

- **Washington University in St.Louis** **St.Louis, US**
Summer Research Intern, Department of Energy and Chemical Engineering - Scientific Computing *May – July 2017*
 - Undertook comprehensive literature review on fractals, aggregation processes and wrote a protocol for conducting computer simulations on high performance computing (HPC) cluster
 - Analysed effects of change in defining parameters like volume fraction on kinetics of the sol to gel transition
- **Techno-Managerial Role** **Mumbai, India**
Technical Councillor, Student Council of Hostel 4, IITB - Led a team of 4 *April 2016 – March 2017*
 - Awarded Color and Special mention for significant contribution to the development of hostel culture
 - Played an Instrumental lead role in achieving the coveted **1st/16** position in Intra-college annual general championship

TEACHING EXPERIENCE

- Teaching Assistant for the courses "Introduction to Statics", "Engineering Mechanics" and "Differential Equations"
- Responsible for mentoring and conducting tutorial sessions for 60 students in each course, Spring 2017 – Fall 2018

EDUCATION

- **University of Illinois at Urbana-Champaign** **Champaign, USA**
Master of Science in Mechanical Engineering; *August 2018 – Present*
 - **Coursework (in progress):** MEMS-NEMS Theory & Fabrication, Mfg. Data and Quality Systems
- **Indian Institute of Technology-Bombay** **Mumbai, India**
Bachelor of Technology in Mechanical Engineering with Minor in Computer Science *Aug 2014 – July 2018*
 - **Coursework:** Machine Learning, Data Structure and Algo, Collaborative Eng., Heat Transfer, Cryogenic Engineering, Manufacturing Automation, Mechanical Measurements, Industrial Engineering & Operations Research, Manufacturing Processes & more. **CPI: 9.32/10.0**

HONORS AND AWARDS

- Awarded Kishore Vigyan Protsahan Yojana(KVPY) scholarship by Department of Science and Technology, India 2014
- Ranked among top 10 in the Mechanical Engineering undergraduate class of 2018