Gowtham Kuntumalla

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EDUCATION

- **University of Illinois at Urbana-Champaign**   **Champaign, USA**
  Master of Science in Mechanical Engineering;   *August 2018 – Dec 2019*
    - **Coursework:** Supply Chain Management and Logistics, Nanoscale Energy Transport, MEMS-NEMS Theory & Fabrication, Mfg. Data and Quality Systems **GPA: 3.9/4.0**

- **Indian Institute of Technology-Bombay**   **Mumbai, India**
  Bachelor of Technology in Mechanical Engineering with Minor in Computer Science   *Aug 2014 – July 2018*
    - **Relevant Coursework:** Machine Learning, Data Structures and Algorithms, Computer Networks & Security, Cryptography, Operating systems, Non Linear Dynamics & Chaos Theory **CPI: 9.32/10.0 - Top 5%**

SKILLS

- **Programming :** *Python (+ Machine Learning)*, C/C++, MATLAB, Linux Shell, LaTeX
- **Misc.:** Project Management, Team Leadership, Rapid Prototyping, Six Sigma (certified), Basics of Financial Investing

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 technical activities
    - Played an instrumental lead role in achieving the coveted **1st**/16 position in Intra-college annual general championship

PROJECTS

- **Metal Polymer Hybrid Heat Exchanger System - (Masters Thesis)**   **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
    - Performed data analysis using Python on thermo-mechanical test data
    - Weight, cost savings of at least 50% are achieved with the current design compared to existing systems

- **Detecting abnormalities in Chest CT scans**   **Feb 2019 - Current**
  Personal Project - **Programming**
    - Developing a computer code using CNN (Convolutional Neural Network) on Python to look for abnormalities in the 3D CT (computational tomography) scans. Collected data from a start-up

- **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

- **Sudoku Autosolver**   **Nov 2014**
  First coding based project, IIT Bombay
    - Coded and debugged an automatic Sudoku solver in C++. Developed graphical user interface using *SimpleCpp* graphics

LEADERSHIP AND AWARDS

- Awarded Kishore Vigyan Protsahan Yojana(KVPY) scholarship by Department of Science and Technology, India 2014
- **Teaching Assistant** - Courses: "Heat Transfer Lab", "Statics", "Engineering Mechanics" and "Differential Equations"
- Awarded **Amateur Mathematician** title and certificate of merit by **IAAMS (Integral Association of Amateur Mathematicians and Scientists)**