

# JISHNU HANDIQUE

PG Scholar with interest in CFD Simulations

## EDUCATION

**M.Tech Thermal and Fluids Engineering**, National Institute of Technology Manipur, Imphal, CGPA - 8.47/10 (expected 2019)  
**B.Tech Mechanical Engineering**, Assam Kaziranga University, Jorhat, CGPA - 8.55/10 (2016)

## SKILLS

OpenFOAM      Ansys (ICEM & Fluent)  
Matlab          SolidWorks  
Python          Basic Knowledge of C

## PROFILES

 <https://www.linkedin.com/in/jishnu-handique/>  
 <https://projects.skill-lync.com/profiles/Jishnu-Handique-255#>

## ENGINEERING EXPERIENCE

### OpenFOAM Sciprtng Project

**Course - Introduction to CFD using Matlab and OpenFOAM**, Skill-Lync

- Developed a program in Matlab to autogenerate the computational mesh for any Wedge Angle and Graded Scheme of a Pipe in order to perform mesh dependency test
- Simulated the Flow for 2D Axi-Symmetric and Symmetric boundary conditions and Evaluated the Results against Hagen-Poiseuille's Equation

### 2D Steady and Transient Heat Conduction Simulation

**Course - Introduction to CFD using Matlab and OpenFOAM**, Skill-Lync

- Developed a 2D Heat Equation Solver in Matlab
- Implemented Jacobi, Gauss Seidel and Successive Over Relaxation (SOR) Linear Solvers
- Implemented a Steady State and Transient State Solver with Implicit and Explicit Methods

### Data Analysis in PYTHON

**Course - Python for Mechanical Engineers**, Skill-Lync

- Developed a Python Program to read CONVERGE STUDIO formatted Simulation Data and plot its various Characteristics

### OpenFOAM Simulation of Flow through a Backward Facing Step

**Course - Introduction to CFD using Matlab and OpenFOAM**, Skill-Lync

- Created multiple Graded Meshes using BlockMesh interface
- Ran the Flow Simulation and Evaluated the Results

### Quasi 1D Supersonic Flow Simulation through a Convergent Divergent Nozzle

**Course - Introduction to CFD using Matlab and OpenFOAM**, Skill-Lync

- Developed a solver in Matlab to solve 1D Governing Equations in Conservative and Non-Conservative form
- Implemented a CFL Number based Time Step Controller and used MacCormack Method for second order time accuracy

### Simulation of Centrifugal Pump Flow

**Course - Flow Simulation using SolidWorks**, Skill-Lync

- Created a 3D model for Centrifugal Pump in SolidWorks
- Ran the Flow Simulation and Analyzed the Result

### Parsing the NASA Thermodynamic Data File

**Course - Matlab for Mechanical Engineers**, Skill-Lync

- Developed a Matlab Program to parse NASA-II polynomial file and Calculated the Thermodynamic Parameters of various Gas Species available in that file

### Dehumidifying Air Cooler

- **Major Project of B.Tech:** Designed a Dehumidifying Air Cooler and Studied its performance

### Design a Machine Vice

- **Mini Project of B.Tech:** A Machine Vice was Designed and Drafted using SolidWorks

### Dual Fuel Engine

- Studied and Analyzed the Fuels' Physical Properties and the Effects of the Performance Parameters of DUAL FUEL Engine in IIT Guwahati

## ACHIEVEMENTS

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### Best Major Project in B.Tech

- Awarded by SAE Club, Assam Kaziranga University

### Runners Up in Engineering Design Competition

- Designed a model of Ornithopter in Assam Kaziranga University

### Anundoram Borooah Award

- Awarded by Government of Assam, India in 2009

### Primary Scholarship

- Awarded by Government of Assam, India during 2003-2005

### Secured First Position in School

- 1998 - 2009

## EXTRA CURRICULAR ACTIVITIES

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- Took initiative to form the *SAE Collegiate Club* in Assam Kaziranga University
- Volunteered in a social drive to *Save Rhino*
- Co-ordinator of KU Winter Fest 2.0
- Wicket-Keeper Batsman in School Cricket Team

## ORGANIZATIONS

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### The Institution of Engineers (India)

- AMIE

### International Association of Engineers

- Membership

### Society of Automotive Engineers (SAE India)

- Student Membership

### Indian Red Cross Society

- Life Membership

## CONTACTS

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