



Personal information



Kislaya Ravi

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Date of birth 24 February, 1991 | **Nationality(-ies)** Indian

Last update May 16, 2019

JOB APPLIED FOR

Working Student

EDUCATION AND TRAINING

Oct 2016 – March 2019

Master in Science, Computational Science and Engineering

Technical University, Munich, Germany

- Multidisciplinary program with confluence of Computer Science, Applied Mathematics and an application field of once choice
- Mathematical modelling, Numerical analysis, Efficient Algorithms, Computer Architecture, Software Design and Implementation, Validation, and Visualization of results
- Master's Thesis: Neural Network Hyperparameter Optimization using SNOWPAC
 - Developed a mixed integer trust-region optimization tool in C++ to optimize non-linear constrained mixed-integer optimization problems
 - Used the developed code to optimize hyperparameters of a neural network and compare it with existing methods

June 2009 – June 2014

Bachelor of Technology, Mechanical Engineering

Master of Technology, Machine Design

Indian Institute of Technology, Banaras Hindu University, Varanasi, India

- Both master and bachelor degree awarded as part of Integrated dual degree course
- Basics of mechanical engineering like machine design, fluid dynamics, solid mechanics, production engineering, operational methods, etc.
- Masters Thesis: Axi-symmetric dynamic response of buried orthotropic cylindrical shells due to compressive wave using Finite Difference techniques.
 - Implemented code in Matlab to solve shell equation and studied the behavior of lifelines like sewage pipes, water pipelines, etc. during earthquakes

WORK EXPERIENCE

Aug 2017 – Sep 2018

Research Assistant

Engineering Risk and Analysis

Technical University Munich, Germany

- Project BAYES: Bayesian updating of engineering models with spatially variable properties
- Generated random field in C++ for given mean and covariance operator and solved corresponding elliptical and parabolic PDE using FEniCS
- Made API in Python by wrapping C++ code to be used for inverse problem solution

Assistant Manager

Maruti Suzuki India Limited, Gurugram, India

- Design and Development of Exterior Trims for New Model Development
- Co-ordinated and managed external vendors for timely development
- Understood various design standards, techniques and pipelines in automobile sector

RELEVANT PROJECTS

June 2017 – July 2017

Lattice Boltzmann Method

Technical University Munich

- Topic: Simulation of Blood Flow through Aorta using Lattice Boltzmann Method
- Implemented Lattice Boltzmann method in C++ for unstructured grid and parallelised the code using MPI
- Decomposed the unstructured domain for proper load balancing
- Got acquainted with various techniques used in parallel programming and High Performance Computing

September 2018 – October 2018

Blind Deconvolution of Blurry Images using CUDA

Technical University Munich

- Topic: GPU Parallelisation of Total Variation Blind Deconvolution using CUDA
- Constructing sharp image from blurry image without prior knowledge of degradation
- Implemented and tuned the code in C++ CUDA framework
- Learned basics of OpenCV, CUDA, profiling and optimization techniques in CUDA

COMPUTER SKILLS

Programming Language

C, C++, Python, Matlab, Bash Scripting

Frameworks/ Tools

PyTorch, CUDA, OpenCV, CMake, Git

Libraries

ARPACK++, GNU Plot, BOOST, FEniCS, MPI, OpenMP, METIS

Softwares and Operating Systems

L^AT_EX, Microsoft Office, Paraview, Windows, Linux

SCIENTIFIC PUBLICATIONS

Uttam, Vishad, Jain, Nitin, and Ravi, Kislaya. Phenomenon of Corrosion in Chrome Plated ABS Parts. No. 2016-28-0066. SAE Technical Paper, 2016.

PERSONAL SKILLS

Mother tongue(s)

Hindi

Other language(s)

	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
German	A2	A2	A2	A2	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
Common European Framework of Reference (CEF) level

Organisational / managerial skills

- Team Leader: Lead the team which represented IIT (BHU), Varanasi in SAE Efficycle 2012, a national level three wheeler efficient vehicle design competition
- SAE Events Organization: Organized various workshops
- Training and Placement Representative Mechanical IDD, 2012

Teaching Experience

Tutorial of Mechanical Measurements at IIT (BHU), Varanasi in 2012

Hobbies

Forró Dancing, Table Tennis, Jogging