

Kshitij Shukla

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SKILLS

Programming

C++ (C++11, STL, OOPS)
MATLAB (basic)

Parallel Programming

CUDA • openMP • MPI

Scripting

Bash • Python

INTERESTS

High performance Computing
Theoretical Computer Science
Graph Theory
Computer Architecture
Compilers

EDUCATION

IIIT HYDERABAD

MS BY RESEARCH IN
COMPUTER SCIENCE
July 2017 - Present

UNIVERSITY OF MUMBAI

BE IN INFORMATION
TECHNOLOGY
July 2011 - May 2015

COURSEWORK

GRADUATE

Introduction to Game Theory
Complexity and Advanced Algorithms
Statistical Methods in AI
Introduction to Parallel Scientific
Computing
Performance Engineering in Software
Systems (MIT OCW)

PROJECTS

RESEARCH PROJECT (ONGOING)

BETWEENNESS CENTRALITY IN EVOLVING GRAPHS C++ | CUDA | OPENMP

Reducing the overhead of recomputing betweenness centrality in evolving graphs after addition/deletion of edges; And using parallel computing frameworks to make algorithm scalable for real world graphs.

IPSC COURSE PROJECT

PARALLEL PAGERANK COMPUTATION

C++ | CUDA

A group project to build a CUDA based application to calculate pagerank of given web matrix using Arnoldi method as subroutine. Demonstrated substantial speedup over sequential execution.

B.E PROJECT

JOURNEY PLANNER USING GENETIC ALGORITHM

C# | .NET

A web based journey planner system was built that takes different places to be visited as input and gives out an optimal order of visiting them that minimizes total time by modeling the computation to Traveling salesman problem.

EXPERIENCE

IIIT HYDERABAD | HEAD TEACHING ASSISTANT FOR IPSC

Conducted tutorials on parallel computing frameworks

Mentored and evaluated course projects

INDUSTRY PROJECT (ONGOING) | RESEARCH ASSISTANT

Analysis of Posit number system

Comparison with IEEE floating point standard

Simulation of Posit arithmetic using High Level Synthesis

ACHIEVEMENTS

GATE 2018

Secured AIR 334 out of 107k candidates (99.69 percentile)

MARTIAL ARTS

Blackbelt 1st Dan in Kimura Shukokai Karate under guidance of Renshi Mohan Singh

MUSIC

Trinity College London Grade 1 & 2 Keyboard certification in Theory and Practical