

# SIDDHARTH JAIN

PhD Student ◊ PMRF Fellow ◊ IIT Hyderabad

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github: sid18996

## EDUCATION

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**Indian Institute of Technology Hyderabad**

Ph.D. in Computer Science and Engineering

*July 2023 - Present*

*CGPA 9.6/10*

**Indian Institute of Technology Hyderabad**

M.Tech.(RA) in Computer Science and Engineering

*2020-2023*

*CGPA 9.57/10*

**Indian Institute of Information Technology Vadodara**

B.Tech. in Computer Science and Engineering

*2015-2019*

*CGPA 8.79/10*

## TECHNICAL SKILLS

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**Programming Languages**

C/C++, Python, Java

**Software & Tools**

LLVM, Clang, LaTeX, Git

## EXPERIENCE

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**Maximl Labs**

*Software Developer*

June 2019 - Sep 2020

- Worked on developing software solutions to digitalize planning and monitoring of turnaround operations in large-scale industries

**Maximl Labs**

*Software Developer Intern*

Jan 2019 - May 2019

- Worked on developing algorithmic solutions for resource-leveling problems in turnaround operations in large-scale industries

**IRLP Lab, DA-IICT**

*Research Intern*

May 2018 - July 2018

- Worked on extraction and summarization of patients' data from the medical reports using NLP techniques.

## PUBLICATIONS

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S. VenkataKeerthy, [Siddharth Jain](#), U. Kalvakuntla, P. S. Gorantla, R. S. Chitale, E. Brevdo, A. Cohen, M. Trofin, R. Upadrasta. "The Next 700 ML-Enabled Compiler Optimizations", International Conference on Compiler Construction (2024) [Link]

S. VenkataKeerthy, [Siddharth Jain](#), A. Kundu, R. Aggarwal, A. Cohen, and R. Upadrasta. "RL4ReAl: Reinforcement Learning for Register Allocation". International Conference on Compiler Construction (2023). [Link]

## TALKS

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Talk on *ML-Compiler-Bridge: Interfacing ML and Compilers*, Technical Talk, LLVM Performance Workshop, Co-located with International Symposium on Code Generation and Optimization (CGO), March 2024. [Slides]

Talk on *ML-LLVM-Tools: Towards Seamless Integration of Machine Learning in Compiler Optimizations*, Technical Talk, Euro LLVM Developers' Meeting, May 2023. [Slides]

Talk on *RL4ReAl: On using Reinforcement Learning for Register Allocation*, Technical Talk, LLVM Performance Workshop, Co-located with International Symposium on Code Generation and Optimization (CGO), February 2023 . [Slides]

## AWARD & ACHIEVEMENTS

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**Kesav Nori Research Excellence Award** 2024

Received Kesav Nori Research Excellence Award for best MTech thesis in the system domain. Thesis title: *Experiments with RL4ReAl: Benchmarking and Compile-Time Improvements*

**Prime Minister's Research Fellowship** 2023

Received prestigious Prime Minister's Research Fellowship

**Travel Grant** 2023

Received travel grant to attend EuroLLVM 2023

## RELEVANT COURSES

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|----------------------------------|-------------------------------------|
| • Advance Compiler Engineering   | • Program Analysis and Optimization |
| • Advance Compiler Optimizations | • Deep Learning for CV              |
| • Compilers for Machine Learning | • Natural Language Processing       |

## POSITION OF RESPONSIBILITY

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**Teaching Assistant** 2021-2024

*Compilers II, Introduction to Compiler Engineering, Advanced Compiler Optimizations*

Duties involved delivering lectures, mentoring students on the course projects, and grading assignments/exams.

**Mess Management Committee Member** April 2024-present

Duties involved carrying out regular inspections of the Student Mess at IIT Hyderabad.