

SIDDHARTH JAIN

PhD Student || PMRF Fellow || IIT Hyderabad
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EDUCATION

Indian Institute of Technology Hyderabad Ph.D. in Computer Science and Engineering	<i>July 2023 - Present</i> <i>CGPA 9.6/10</i>
Indian Institute of Technology Hyderabad M.Tech.(RA) in Computer Science and Engineering	<i>2020-2023</i> <i>CGPA 9.57/10</i>
Indian Institute of Information Technology Vadodara B.Tech. in Computer Science and Engineering	<i>2015-2019</i> <i>CGPA 8.79/10</i>

TECHNICAL SKILLS

Software & Tools	LLVM, Clang, LaTeX, Git
Frameworks	Django, Angular, PyTorch
Programming Languages	C/C++, Python, Java

EXPERIENCE

Maximl Labs June 2019 - Sep 2020
Software Developer

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

Maximl Labs Jan 2019 - May 2019
Software Developer Intern

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

IRLP Lab, DA-IICT May 2018 - July 2018
Research Intern

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

PUBLICATIONS

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*”. In Proceedings of the 33rd ACM SIGPLAN 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*”. In Proceedings of the 32rd ACM SIGPLAN International Conference on Compiler Construction 2023. [Link]

TALKS

Delivered a talk on *ML-Compiler-Bridge: Interfacing ML and Compilers*, at Eighth LLVM Performance Workshop at CGO, March 2024. [Slides]

Delivered a talk on *ML-LLVM-Tools: Towards Seamless Integration of Machine Learning in Compiler Optimizations*, at European LLVM Developers' Meeting, May 2023. [Slides]

Delivered a talk on *RL4ReAl: On using Reinforcement Learning for Register Allocation*, at Seventh LLVM Performance Workshop at CGO, February 2023. [Slides]

AWARD & ACHIEVEMENTS

Kesav Nori Research Excellence Award *2024*

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

Prime Minister's Research Fellowship *2023*

Received the prestigious Prime Minister's Research Fellowship

Travel Grant *2023*

Received travel grant to attend 2023 European LLVM Developers' Meeting (EuroLLVM)

RELEVANT COURSES

Compilers & PL Adv. Compiler Engineering, Adv. Compiler Optimizations, Compilers for ML

ML & DL Deep Learning for CV, Information Retrieval, Natural Language Processing

POSITION OF RESPONSIBILITY

Teaching Assistant *2021-present*

Courses: Compilers II, Introduction to Compiler Engineering, Advanced Compiler Optimizations

Work involved creating assignments, taking lab sessions, and grading exams.

Mess Management Committee Member *April 2024-present*

Work involves carrying out regular inspections of mess, and menu preparation for student mess at IITH.