

SHASHWAT JAISWAL

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EDUCATION

University of Illinois Urbana-Champaign

Illinois, USA

PhD Student, Computer Science | GPA: 4.0 / 4.0

August 2023 - Present

Projects: Resource Management and Reliability in Data Centers, Distributed and Shared Memory with CXL

Indian Institute of Technology (IIT) Bhilai

Bhilai, India

B.Tech. (Honors), Computer Science | GPA: 9.8 / 10.0 | Rank 1 out of 132

July 2019 – May 2023

Thesis: A Lightweight Peer-to-Peer Spatio-temporal Edge Datastore for UAV Fleets

Awards: President of India Gold Medal for Highest GPA amongst all Graduating Students

Senate's Award for Highest GPA amongst all Graduating Students in CS

Alumni Association's Young Researcher's Award

Baroda Achiever's Award for Academic Excellence

P K Jain Memorial Award/Gold Medal for Institutional and Societal Development

R P Singh Memorial Award for Leadership and Social Work

GeetAmal Ghosh-Roy Award for Academic Excellence

St. Francis' College

Lucknow, India

Senior Secondary, Science | Score: 96.75% | Rank 1 out of 164

May 2019

Award: Rev. Fr. Romano Scholarship for Academic Excellence

EXPERIENCE

Google Research

Mountain View, CA

Student Researcher

Sep 2024 – Dec 2024

- Analyzing sensitivity of applications to network hotspots (ToR and NIC congestion) in Google's data center networks.
- Proposed hotspot-aware load balancing and scheduling strategies to proactively and reactively alleviate SLO violations.

Microsoft Research

Bangalore, India

Research Intern

May 2024 – August 2024

- Optimizing and measuring performance of large-scale heterogeneous LLM clusters and workloads.
- Simulated end-to-end LLM inference pipeline, auto-scaling, load forecasting, load balancing, routing etc.

The University of British Columbia

Vancouver, Canada

Visiting International Research Student

May 2023 – August 2023

- Worked on building a general purpose anomaly detection framework for edge systems like drones, smart farms etc.
- Adapted Language Models and implemented DSL to predict edge sensor data. Mentor: **Prof Karthik Pattabiraman**

EVM Management System 2.0

Raipur, India

Principal Investigator

April 2022 – March 2023

- Awarded a project for building EVM Management System for Election Commission of India worth INR 36 Million.
- Solution intended to be used in the 2024 National General Elections of India at a scale of upto 100,000 concurrent users.

The University of British Columbia

Vancouver, Canada

Visiting International Research Student

May 2022 – August 2022

- Worked on Characterizing Temperature Variability on Nvidia Jetson platforms with standard CNN benchmarks.
- Optimization of parameters to ensure QoS within the specified energy budget on drones. Mentor: **Prof Matei Ripeanu**

The Linux Foundation @ Open Mainframe Project

Remote

Software Developer Intern

June 2022 – August 2022

- Worked on the Anomaly Detection Engine under the Open Mainframe Project to detect anomalous behaviour via logs.
- Added support for parsing and analysing Nginx logs to detect possible anomalies and improved support for Spark.

Google

Bangalore, India

Cloud Engineer Intern

May 2022 - July 2022

- Data Engineer for data orchestration, pipeline and Looker dashboard setup for Telenor, a Google Cloud Customer.
- Snowflake and SQL Server to Big Query migration advisory for Adtalem, a Google Customer.

Google Summer of Code @ Checkstyle

Remote

Software Developer

May 2021 – August 2021

- Worked on adaptation of Behavior Driven Development Ideas for Testing of Source Code and Validation Algorithms.
- Migrated the project to Truth - Google's new assertion framework and incorporated new Pitest mutators.

PUBLICATIONS

- Shashwat Jaiswal, Kunal Jain, Anjaly Parayil, Ankur Mallick, Chetan Bansal, et al. 2025. Heterogeneous LLM Serving at Scale. Under review at a conference.
- Chloe Alverti, Shashwat Jaiswal, Tianyin Xu and Josep Torrellas. 2025. Fast Remote Fork over CXL Memory. Under review at a conference.
- Xiaojuan Ma, Shashwat Jaiswal, Chirag Shetty and Indranil Gupta. 2025. Memory Balanced Model Parallelism for ML. Under review at a conference.
- Shashwat Jaiswal, Suman Raj, Subhajit Sidhanta and Yogesh Simmhan. 2024. A Spatiotemporal Datastore for Drone Fleets. Under review in a journal.
- Amirhossein Ahmadi, Hazem Abdelhafez, Shashwat Jaiswal, Karthik Pattabiraman, and Matei Ripeanu. 2023. Hot Under the Hood: An Analysis of Ambient Temperature Impact on Heterogeneous Edge Platforms. In Proceedings of the 6th International Workshop on Edge Systems, Analytics and Networking (EdgeSys '23). **Best Paper Award**
- Shashwat Jaiswal, Suman Raj, Subhajit Sidhanta and Yogesh Simmhan. 2023. A Lightweight, Mobility-Aware, Geospatial & Temporal Data Store for Multi-UAV Systems. In Proceedings of the 23rd IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing Workshops (CCGrid'23), Bangalore, India.
- Sahiba Suryawanshi, Dhiman Saha, and Shashwat Jaiswal. 2023. TIDAL: Practical Collisions on State-Reduced Keccak Variants. In Applied Cryptography and Network Security: 21st International Conference, ACNS 2023, Kyoto, Japan, June 19–22, 2023, Proceedings, Part I.
- Shashwat Jaiswal and Subhajit Sidhanta, "Toward a smart multi-unmanned aerial vehicle system," in IEEE Potentials, vol. 41, no. 1, pp. 22-25, Jan.-Feb.

RELEVANT SKILLS

Languages:	Java C++ C Python Go Dart Javascript SQL HTML/CSS
Frameworks:	Django FastAPI Truth JUnit React Tensorflow PITest OpenMP gRPC
Platforms:	Linux Web Windows Amazon Web Services Google Cloud Platform Nvidia Jetson
Tools:	Git MySQL ANTLR Flex Bison Firebase Docker CI/CD
Other Skills:	Content Writing Public Speaking Communication Team-Work Management

COURSEWORK

Pursuing:	Parallel Programming
Completed:	Artificial Intelligence, Information Retrieval, Computer System Design, Information Security, Natural Language Processing, Graph Theory, ML Applications for Wireless Communication, Machine Learning, Cryptography, Computer Networks, Principles of Programming Languages, Blockchain Technologies, Algorithms, Data Structures, Databases, Data Systems + ML Introduction to Language Processing (Compilers), Discrete Structures, Computer System Organisation Theory of Computation, Operating System, Advanced Distributed Systems, Lightweight Cryptography

ACHIEVEMENTS

Present	Rated 5 Star on CodeChef and 1700+ (Expert) on Codeforces
Sep 2023	Dan Kohn Scholarship by The Linux Foundation
Sep 2022	Honorable Mention at ACM ICPC Asia Regionals for three consecutive years 2020, 2021, 2022
May 2022	Global Top 50 in the Solution Challenge 2022 by Google
Mar 2022	German Academic Exchange Service DAAD WISE Scholarship 2022
Dec 2021	Mitacs Globalink Research Internship Award
Mar 2021	Google Hash Code - National Rank 11 (Global Rank 143) by Google

LEADERSHIP AND VOLUNTEERING

2021-22	Google Developer Student Club Lead
2020-23	Microsoft Learn Student Ambassador
2020-23	Open Source Mentor at OpenLake, India (Open Source Society)
2020-23	Representative, Institute's Undergraduate Committee, IIT Bhilai (Nominated by Dean, Academics)
2020-21	Chairperson, Students' Senate at IIT Bhilai (Elected)
2020-21	President, Ingenuity (Coding Club), IIT Bhilai (Nominated)