

# Sai Anuroop Kesanapalli

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## EDUCATION

**M.S., University of Southern California**

Major: Computer Science

August 2022 - May 2024 (Exp.)

CGPA: 3.5/4

**B. Tech., Indian Institute of Technology Dharwad**

Major: Computer Science and Engineering

July 2017 - June 2021

CPI: 8.86/10

## INTERESTS

Statistical Machine Learning, Deep Learning Theory, Federated Learning, Distributed and Stochastic Optimization, Edge-Computing and Edge-GPU Performance Characterization.

## PUBLICATIONS

1. Prashanthi S. K, **Sai Anuroop Kesanapalli**, and Yogesh Simmhan. "Characterizing the Performance of Accelerated Jetson Edge Devices for Training Deep Learning Models". In: *Proc. ACM Meas. Anal. Comput. Syst.* 6, 3, Article 44 (December 2022). 2022. doi: [10.1145/3570604](#).
2. Prashanthi S. K, Aakash Khochare, **Sai Anuroop Kesanapalli**, Rahul Bhope, and Yogesh Simmhan. "Don't Miss the Train: A Case for Systems Research into Training on the Edge". In: *2022 IEEE International Parallel and Distributed Processing Symposium Workshops (IPDPSW)*. 2022, pp. 985–986. doi: [10.1109/IPDPSW55747.2022.00157](#).
3. Prashanthi S. K, **Sai Anuroop Kesanapalli**, Aakash Khochare, and Yogesh Simmhan. "Characterizing the Performance of Deep Learning Workloads on Accelerated Edge Computing Devices". In: *28th IEEE International Conference on High Performance Computing, Data & Analytics Student Research Symposium (HiPC SRS)*. 2021, [Poster].
4. **Sai Anuroop Kesanapalli** and B. N. Bharath. "Federated Algorithm with Bayesian Approach: Omni-Fedge". In: *ICASSP 2021 - 2021 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*. 2021, pp. 3075–3079. doi: [10.1109/ICASSP39728.2021.9413571](#).

## RESEARCH EXPERIENCE

### RESEARCH ASSISTANT

**USC Viterbi, Los Angeles**

Advisor: Prof. Vatsal Sharan

March 2023 - Present

Working on code optimization for projects on tensor decomposition methods, and anomaly detection using density-based algorithms.

### PROJECT ASSOCIATE - I

**IISc Bangalore**

Advisor: Prof. Yogesh Simmhan

August 2021 - July 2022

Worked on performance characterization of Nvidia Jetson edge-accelerators on deep learning workloads, and also on a Federated Learning project involving dataset condensation as a subroutine [1, 2, 3].

### UNDERGRADUATE RESEARCHER

**IIT Dharwad (B. Tech. Project I & II)**

Advisor: Prof. B. N. Bharath

August 2020 - June 2021

Worked on Federated Algorithms with Bayesian [4] [Code | Slides] and Exponential Weighted Average [Report | Code] approaches.

## SKILLS

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<b>Programming Languages</b>	Python, C++, C, Java, Go, Bash
<b>Libraries</b>	Flower, PyTorch, TensorFlow, Keras, NumPy, Pandas, Matplotlib, Seaborn, STL
<b>Tools</b>	Git, L <sup>A</sup> T <sub>E</sub> X
<b>OS</b>	Linux, MacOS

## OTHER PROJECTS

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<b>Heterogeneity-Aware Hashing</b>	<a href="#">[Slides]</a>   <a href="#">[Report]</a>   <a href="#">[Code]</a>
<b>Credit Card Fraud Detection</b>	<a href="#">[Poster]</a>   <a href="#">[Report]</a>   <a href="#">[Code]</a>
<b>Implementation of Immediate Files in Minix OS</b>	<a href="#">[Report]</a>   <a href="#">[Code]</a>
<b>Buffer Manager for PF Layer of ToyDB</b>	<a href="#">[Report]</a>   <a href="#">[Code]</a>
<b>Processor Simulator for ToyRISC</b>	<a href="#">[Code]</a>
<b>TCP Congestion Control</b>	<a href="#">[Report]</a>   <a href="#">[Code]</a>

## STUDENT-OFFICES HELD

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<b>Mentor</b> , Viterbi Graduate Mentorship Program, USC	2023 - present
<b>Student Coordinator</b> , Institute Innovation Council, IIT Dharwad	2019 - 2021
<b>Student Mentor</b> , Institute Student Mentorship Programme, IIT Dharwad	2019 - 2020
<b>Outreach Team Lead</b> , Parsec: A Paradigm Shift, IIT Dharwad's Annual Tech Fest	2020
<b>Event Coordinator</b> , Development of Industry-Academia Link (DIAL), IIT Dharwad	2018

## ACHIEVEMENTS & AWARDS

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- 2017 IIT JEE (Advanced) **All India Rank 8682** among 0.16 million candidates.
- 2016 Telangana **State 1<sup>st</sup> Rank** among around 0.7 million students in first year and under top ten ranks in second year intermediate examinations conducted by TSBIE.
- 2014 Received **Certificate of Merit** from CBSE Delhi, for outstanding performance and for obtaining Grade **A1** in all the five subjects in Secondary School Examination.
- 2014 Recipient of Meritorious Student, School Topper and Star of Stars awards at St. Michael's School, Secunderabad.

## LANGUAGES

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<b>Telugu</b>	Native
<b>English</b>	Advanced
<b>Hindi</b>	Fluent
<b>Kannada</b>	Beginner

