Suryateja Bulusu Venkata

Curriculum Vitae

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Education

2016 – 2020 Bachelor of Technology, ***Indian Institute of Technology Kanpur***

Major in Electrical Engineering and Minor in Machine Learning (Computer Science)

CGPA: 9.4/10; Academic Excellence Awards

Advisor Prof. Piyush Rai; *Thesis*: Bayesian Clustering of Bandits for Sequential Recommendations

Experience

2022 – present Software Development Engineer 3, ***Avanti Fellows**, India*

Topics: Scalable Open Source Software for Public Service Systems, AI for Social Impact

– I played a major role in developing open-source tools for India's public school systems, reaching over 250,000 students across 5,000 schools. These tools enable assessments, attendance tracking, resource access, reporting, and data analysis for thousands of students and teachers daily.

– Handling the complete tech infrastructure, I ensure usability at production standards in low-resource environments with support for multiple local languages. Additionally, I provide technical guidance to NGO collaborators, expanding the accessibility of these tools to non-educational settings.

– I lead a project applying LLM-based interventions to enhance student memory retention, emphasizing responsible, ethically-aligned AI practices in education.

2020 – 2022 Research Associate 2, ***Adobe Research**, India*

Topics: Multimodal Learning, Neural Compression, Post-OCR Error Correction, and Reinforcement Learning for Digital Creative Collaboration

– I worked closely with senior researchers through all research phases, from ideation and experimentation to iterative writing and dissemination. I co-led projects that culminated in 4 patents and 3 publications at top-tier venues like WACV, CVPR, and CHI. [Google Scholar]

– I deployed production-quality models for mobile applications, emphasizing efficiency for on-device performance in products such as Adobe Scan.

May – July 2019 Research Intern, ***Adobe Research**, India*

Mentor: Balaji Vasan Srinivasan; *Topic*: Multimodal Learning for Retrieval and Generation

– I developed an application to automatically generate customized image-text combinations from input articles, aligning both content and style to specific user needs.

– Our work resulted in a publication at IUI 2020, a patent filing, and recognition as one of the top 7 projects at Adobe Summit 2020.

Awards & Honours

July 2024 RAIL Fellowship, Digital Futures Lab; one of 14 recipients in the inaugural cohort [video]
– "To support responsible AI initiatives in social impact organizations"

May 2017 First Place in Microsoft's Code.Fun.Do hackathon; one of 37 teams shortlisted nationally [video]
– "Code.Fun.Do that spots exceptional talent" - **The Hindu**

2017 & 2018 Academic Excellence Awards by IIT Kanpur; among 850 students

May 2016 All India Rank 166 in JEE Main 2016; among 1.5 million students

Publications

Peer-reviewed Conferences

2023 Recipe2Video: Synthesizing Personalized Videos from Recipe Texts [pdf] [video]

Prateksha Udhayanan, **Suryateja BV**, Parth Laturia, Dev Chauhan, Darshan Khandelwal, Stefano Petrangeli, Balaji Vasan Srinivasan

The IEEE/CVF Winter Conference on Applications of Computer Vision (**WACV 2023**).

2022 Towards Enabling Synchronous Digital Creative Collaboration: Codifying Conflicts in Co-Coloring [pdf] [video] [poster]

Suryateja BV, Jeet Patel, Atharva Naik, Yash Parag Butala, Sristy Sharma, Niyati Chhaya

CHI Conference on Human Factors in Computing Systems Extended Abstracts (**CHI LBW 2022**).

2022 User-Guided Variable Rate Learned Image Compression [pdf]

Rushil Gupta, **Suryateja BV**, Nikhil Kapoor, Rajat Jaiswal, Sharmila Reddy Nangi, Kuldeep Kulkarni

The IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR 2022 Workshop**).

2020 Generating Need-Adapted Multimodal Fragments [pdf]

Gaurav Verma, **Suryateja BV**, Samagra Sharma, Balaji Vasan Srinivasan

The 25th International Conference on Intelligent User Interfaces (**IUI 2020**).

– "Innovative ideas that evolve the way brands interact with customers" – **Adobe Summit 2020**

– "Adobe tests an AI recommendation tool for headlines and images" – **TechCrunch**

Patents (Granted & Applications)

2024 Auto-Generating Video to Illustrate a Procedural Document [pdf]

Suryateja BV, Prateksha Udhayanan, Parth Satish Laturia, Chauhan Dev Girishchandra, Darshan Khandelwal, Stefano Petrangeli, Balaji Vasan Srinivasan

US Patent No. 12,027,184 — Adobe Inc.

2024 Intelligent Change Summarization for Designers [pdf]

Suryateja BV, Vishwa Vinay, Niyati Himanshu Chhaya, Navita Goyal, Elaine Chao, Balaji Vasan Srinivasan, Aparna Garimella – US Patent No. 11,954,431 — Adobe Inc.

2023 User-Guided Variable Rate Image Compression [pdf]

Suryateja BV, Sharmila Reddy Nangi, Rushil Gupta, Rajat Jaiswal, Nikhil Kapoor, Kuldeep Kulkarni

US Patent No. 17,714,812 — Adobe Inc.

2022 Content Fragments Aligned to Content Criteria [pdf]

Gaurav Verma, **Suryateja BV**, Samagra Sharma, Balaji Vasan Srinivasan

US Patent No. 11,308,146 — Adobe Inc.

Talks & Presentations

July 2022 The Evolution of AI: From Rules to Prompts, Tech4Dev Sprint [slides]

Aug 2021 Post-OCR Error Detection and Correction, Adobe Research [video] [slides]

Software

2022 – present I maintain multiple open-source tools for public education, including: Quiz Engine [code], Scholarship Finder [code], Session Manager [code], Reporting Engine [code]

Mentoring

Teaching

Jan – Mar 2020 Teaching Assistant for CS202 Mathmatics for Computer Science at IIT Kanpur; with *Prof. Amit Seth*

– Part of a team of teaching assistants for an undergraduate course. Responsibilities included grading homework, providing feedback, and supporting a cohort of 200 students.

Mentoring

2023 – present Volunteering at Avanti to support colleagues in basic Python and data analysis. [video]

2023 – 2024 Mentored 5 contributors as part of the Code For GovTech program, advancing the Digital Public Goods and Infrastructure initiatives.

2020 – 2022 Mentored 7 undergraduate students as part of the Adobe Summer Research Internship program.

2019 Co-led IIT Kanpur's Guidance program in providing support to students on academic probation.

2018 Maching Learning Tutor for IIT Kanpur's Programming Club.

2017 – 2018 Mentor for IIT Kanpur's Counselling Service to assist students struggling in mathematics.