

Omkar Chekuri

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SUMMARY Passionate PhD candidate in Computer Science at the University of Oklahoma under the guidance of Dr. Chris Weaver. I am deeply committed to advancing the field of information visualization, specializing in the intricacies of interaction and coordination in visualization. My expertise lies in crafting intuitive user interfaces and designing robust data pipelines to enable exploration of hierarchical data structures.

EDUCATION

University of Oklahoma, Norman, Oklahoma, USA

- *Ph.D. Candidate in Computer Science*, Aug 2018 – Present
Research areas: Information Visualization
Advisor: Dr. Chris Weaver
- *M.S. in Data Science and Analytics*, Jan 2016 – May 2018
Cumulative GPA: 3.5 / 4.0

Jawaharlal Nehru Technological University, Kakinada, Andhra Pradesh, India

- *Bachelor of Technology in Mechanical Engineering*, Aug 2008 – Jun 2012
Cumulative GPA: 3.3 / 4.0

EXPERIENCE ACADEMIC POSITIONS

Graduate Research Assistant (Mentor: Dr. Ziho Kang), University of Oklahoma, Norman, USA

- Development of VR environments and data collection modules for eye tracking, fNIRs, and haptic devices for “*Multi-person VR Environment*” focusing on learning in immersive environments.

Graduate Research Assistant (Mentor: Dr. Chris Weaver), University of Oklahoma, Norman, USA

- Developed a gallery of “*gesture designs*” to support direct manipulation of data within the views.

Graduate Research Assistant (Mentor: Dr. Sridhar Radhakrishnan), University of Oklahoma, Norman, USA

- Developed a “*mobile application system*” for transit providers managed by Oklahoma Department of Transportation.

EXPERIENCE - INDUSTRY POSITIONS

Cloud Nine Development LLC, Norman, USA

Data Analytics Intern, Mentor: Dr. Sridhar Radhakrishnan Jan 2018 – May 2018

- Developed custom analytics dashboard using R studio to forecast business using time series models by using metrics gathered through google analytics service.
- Studied business problems and made recommendations on the various key performance indicators to collect using google analytics.

Construction Development Company, Doha, Qatar

SAP CMMS Engineer, Mar 2013 – Feb 2015

- Worked with various clients in the EPIC (Engineering, procurement, installing, and commissioning) projects in coordinating the project, planning, and implementing the asset management system, data management, and preparation of project status reports using Excel.

Aker Solutions, Kakinada, Andhra Pradesh, India

Mechanical Engineer, Jun 2012 – Jan 2013

- Performed general and preventive maintenance of equipment. Prepared M&L (maintenance and logistics) reports and maintained records of safety checks conducted regularly.

Andhra Pradesh Paper Mills Limited, Rajahmundry, Andhra Pradesh, India

Engineering Intern, Aug 2011– Mar 2012

- Assisted the operations team in planning the supply chain routes and improvement of the efficiency of paper production.

RELEVANT PROJECTS

- **Solving Dynamic Perfect Mazes Using Reinforcement Learning:** Implemented Q-Learning and Multi Agent SARSA for dynamically generated perfect mazes.
- **2.5D Platformer Game Using LWJGL Library:** Developed a fully functional 2.5D platformer game.
- **Distributed Sudoku Solver Using Docker:** Implemented a distributed Sudoku solver in a Docker environment.

JOURNAL/CONFERENCE PAPERS

Published:

- Xuxin Chen et al. "David vs. Goliath: large foundation models are not outperforming small models in multi-view mammogram breast cancer prediction" - SPIE Medical Imaging, 2024. The computer-Aided Diagnosis Best Paper Award Second Place winner.

In Revision:

- Omkar Chekuri, and Chris Weaver "C4D3: View-level Abstraction and Coordination library for building Coordinated multiple views using D3".
- Omkar Chekuri, and Chris Weaver "A Model of the Representational Suitability of Tree Visualizations".

POSTERS

- Omkar Chekuri, and Chris Weaver "An Investigation into the Representational Suitability of Tree Visualizations", IEEE VIS 2022.

AWARDS

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| • College of Continuing Education State of Outreach Innovation Award | 2024 |
| • Recipient of CS Alumni Grad Fellowship | 2024 |
| • Recipient of Richard L. O'Shields Engineering Scholarship | 2023 |
| • Recipient of CS Alumni Grad Fellowship | 2022 |
| • PhD Recruitment Excellence Fellowship, University of Oklahoma | 2018 |
| • Academic Excellence Award, Army ROTC, University of Oklahoma | 2017 |

SERVICE

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| • Student Volunteer (IEEE Vis 2022) | 2022 |
| • Reviewer (IEEE Vis, EuroVis) | 2023 - till date |
| • Instructor (CS1213 - Intro to Python) | 2020 - till date |

TECHNICAL SKILLS

- **Programming Languages:** Proficient in JavaScript, Python, Java, SQL, R; Familiar with C, C#, C++
- **Libraries/Frameworks:** D3.js, Impropise, React, Streamlit, NLTK, Scipy, Node.js, Express.js
- **Design Tools:** AUTOCAD, CATIA

LEADERSHIP

- **Member, Graduate Student Community at University of Oklahoma:**
Proactively participate in regular meetings to tackle the diverse challenges faced by graduate students across departments. Contribute to initiatives focused on fostering inclusivity within the graduate student community by advocating for increased representation. Strive to secure funding from diverse resources to support graduate students.
- **Member, Data Science and Analytics Association at University of Oklahoma:**
Collaborate in organizing and participating in presentations in data science and analytics community.
- **Former Cadet, University of Oklahoma ARMY ROTC:**
Organize and actively participate in community events such as blood donation drives and charity marathons. Dedicate efforts to raising awareness and funds for various causes, including those supporting veterans within the ARMY ROTC community.