Omkar Chekuri

Email: omkar.chekuri@gmail.com | **Portfolio:** https://omkarchekuri.github.io

SUMMARY   I am a PhD candidate in Computer Science at the University of Oklahoma, advised by Dr. Chris Weaver. I Specialize in interaction, coordination, and information visualizations with a focus on developing user interactions and architecting data pipelines for interactive data 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 "*gestures*" for data manipulation in coordinated multiple view visualization.

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

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

SERVICE

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, Improvise, React, Streamlit, NLTK, Scipy, Node.js, Express.js

- **Design Tools:** AUTOCAD, CATIA

LEADERSHIP

- Member, Graduate Student Community at University of Oklahoma

- Member, Data Science and Analytics Association at University of Oklahoma

- Member, Human Factors and Ergonomics Society at University of Oklahoma

- Former Cadet, University of Oklahoma ARMY ROTC