

Saksham Goel

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EDUCATION

University of Minnesota -Twin Cities, College of Science and Engineering

Bachelor of Science in Computer Science

September 2015 - Present

Expected Graduation – May 2019

- **CGPA:** 4.00
- **Dean's List:** Fall 2015, Spring 2016, Fall 2016, Fall 2017
- **Gopher Gold Scholar**
- **Computer Science and Engineering Scholar**
- **Relevant Coursework:** Program Design and Development, Operating Systems, Database Systems, Big Data Analytics, Algorithms and Data Structures, Functional Programming, Linear Algebra, Regression, Machine Architecture, Probability

WORK EXPERIENCE

Research Assistant, Data Analysis and Management Research Group, UMN

Sep 2017 – Present

- Explored, Identified and Engineered ways of predicting user behaviour in domain of viral marketing by monitoring their social activity and network structure
- Developed web scraping scripts in python to extract data from Pinterest and Twitter and to implement graph processing algorithms (TSM, Multiple Cascade) on the dataset obtained and plot results of the processing algorithms to achieve better understanding of the dataset and relationships between its properties
- Presented a paper on K-Core algorithm and illustrated possible ways to use it for the social influence research project

Web Developer Intern, Artemisia College of Arts and Design, Indore, India

May – June 2017

- Developed the website for the Artemisia College of Arts and Design in Indore using HTML, CSS and Bootstrap
- Maintained a Git repository for the web development team and helped them organize it for fast retrieval and transfer of information and delegated tasks to the team members and kept track of the progress.

Teaching Assistant, Computer Science Department, UMN

Jan 2017 – Present

CSCI 2041 - Functional Programming

- Debug students' programs written in OCaml and help them understand by pointing out syntactical and logical errors
- Teach core concepts of the functional programming paradigm, answer students' questions in office hours and suggest ways to optimize code by removing redundancies and implementing better coding techniques
- Inspect the automatic feedback and grading scripts for the course to remove possible bugs and Grade programming assignments and exams

TECHNICAL SKILLS

- Proficient – Python, Java, C++, C, Linux, BASH, GIT, OCaml, Clojure, MS Office
- Familiar – Assembly, MATLAB, MySQL, HTML, CSS, PHP, JavaScript, XML, Photoshop, Corel Draw

PROJECTS

Tac-Tic-Toe, Web Game Development (In Progress)

Jan 2018 - Present

- Founded a new game based on Tic-Tac-Toe and developed python scripts enabling a user to play the game in 2 different modes (vs Player or vs Computer) in 3 different difficulty level (Easy, Medium, Hard) for 4 different types of games (Simple, 3 in a Row, Ultimate, Crooked)
- Engineered Python scripts for a computer bot to play against human players using the DFS graph traversal algorithm, that has achieved the expert human player level
- Integrating the game onto a web platform using HTML, CSS, PHP and JavaScript.

Personal portfolio website (In Progress)

Jan 2018 - Present

- Developing my own personal portfolio website using HTML and CSS and integrating features offered by Bootstrap

Robot Game Simulator, Program Design and Development

Sep – Dec 2017

- Wrote 1000 lines of code in C++ for a robot game simulator.
- Implemented Strategy Pattern, Observer Pattern and Polymorphism to achieve desired features in the game
- Used file parsing to set the initial conditions for the game
- Refactored the code as per industry standards using the vast functionality provided by GitHub in a professional manner

Bus Line Simulation, Intro to Algorithms and Data Structures

Sep – Dec 2016

- Wrote 500 lines of code in JAVA using discrete event simulation to simulate the bus line in Minneapolis
- Implemented discrete event simulation using priority queue and adding events in it for passengers and buses
- Gathered statistics and developed a project report to recommend the most cost-effective way of running the bus line in Minneapolis

LEADERSHIP SKILL

Campus Outreach + Treasurer, International Buddy Program (IBP), ISSS, UMN

May 2017 - Present

- Collaborate with other student groups and organize large events expecting 200 students
- Prepare the club's budget and ensure that club activities adhere to the budget