

# Amrit Rathie

SOFTWARE ENGINEERING INTERN

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## Projects

### Septre Insights | Diagnose 7 diseases with a smartphone

HackUTD VIII

HACKUTD - LARGEST UNIVERSITY HACKATHON IN TEXAS

Nov 2021

- Built PyTorch Machine Learning dataset by
- Used ML model to diagnose 7 different diseases, including diabetes and glaucoma, using digital funduscopy with over 85% accuracy.
- Developed Vue.js Frontend and Swift Mobile App connected to Flask API with PostgreSQL Backend.

### Degree Planner | Drag and drop degree planner app for UTD courses

The University of Texas at Dallas

UTD NEBULA - STUDENT ORGANIZATION CREATING OPEN SOURCE SOFTWARE FOR STUDENTS

Fall 2022

- Implemented Course Validation functionality, allowing users to verify their class schedule.
- Contributed Degree Plan Validation functionality, enabling automatic auditing of a degree plan without an advisor.
- Mentored a group of 4 students on frontend technologies HTML/CSS/JS, TypeScript, and Next.js.

### Comparison of Swarm Robotics Algorithms | Cooperation of a swarm of simple robots

The University of Texas at Dallas

ACM RESEARCH - 12-WEEK RESEARCH COMPETITION

Fall 2021

- Compared 3 algorithms for controlling robotics with decentralized control and cooperation.
- Designed simulation to collect behavioral data of robots performing resource collection tasks using C++ and Unreal Engine.
- Analyzed simulation data for statistical differences using Pandas and visualized data for presentation using Seaborn.
- Presented at the Biannual ACM Research Symposium.

## Professional Experience

### ObjectWin, Inc.

Houston, Texas

MOBILE APPLICATIONS DEVELOPER - SUMMER INTERNSHIP

Jun 2020 - Aug 2020

- Developed mobile application for time-sheet entry using Ionic.
- Collaborated with a global team to connect frontend components written in AngularJS with SQL Server database.
- Ameliorated time-sheet entry for consultants at tech consulting company.

## Skills

|                              |   |
|------------------------------|---|
| <b>Programming Languages</b> | Rust, Python, SQL, JavaScript, Go, Java, Bash, C, C++, Haskell, $\LaTeX$ , MIPS & ARM Assembly        |
| <b>Tools and Platforms</b>   | Linux, Docker, Git, Ansible, Kubernetes, Cloudflare, AWS, PostgreSQL                                  |
| <b>Libraries</b>             | Numpy, Pandas, Seaborn, Flask, FastAPI, Jinja2, Gin, Go Template, Vue/Nuxt, React/Next, Rocket, Tokio |
| <b>Languages</b>             | English (native), Hindi (elementary), Marathi (conversational), American Sign Language (elementary)   |

## Education

2021-2025 **The University of Texas at Dallas**, B.S. in Computer Science

Richardson, Texas

2017-2021 **Grapevine High School**, High School Diploma

Grapevine, Texas

## Awards

|           |  |                   |
|-----------|--|-------------------|
| 2021      | <b>Academic Excellence Scholarship</b> , The University of Texas at Dallas | Richardson, Texas |
| 2019-2021 | <b>AP Scholar with Distinction</b> , Grapevine High School                 | Grapevine, Texas  |
| 2020      | <b>National AP Scholar</b> , Grapevine High School                         | Grapevine, Texas  |
| 2019      | <b>Director's Choice</b> , Grapevine High School Band                      | Grapevine, Texas  |