

Aneesh Saripalli

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Education

Honors B.S. in Computer Science, Expected Graduation 2020

The University of Texas at Dallas

GPA: 3.95/4.0 - Dean's List Fall 2017, Spring 2018

Languages & Tools

- Java (6 years): 2D game development, threading, network sockets, graphics, text manipulation, OOP
- C++ (2 years): OOP, lambda expressions, pointers/references, RAII, STL
- Python (2 years): OpenCV, CSV data processing/manipulation
- Node.js (1 year): Express framework, asset request routing, HTTP requests, API design, Web3.js
- Git (3 years): used for 10+ projects, branching, merging, reverting, GitHub/GitLab
- Flutter (.5 year): Contact app at <https://github.com/AneeshSaripalli/socialite>

Professional Experience

Intel Corporation, Intel Sports, Undergraduate Technical Intern June '18 – May '19

- Wrote an automated processing script to analyze 200,000 lines of CSV and HTML data file
- Designed an interactive Java GUI to track players and visualize game movement to analyze patterns in CSV data
- Analyzed technical papers on camera positional optimization to evaluate the most relevant algorithm
- Designed a Python framework to optimize pixel quality in stadium CAD models using Maya's Python API
- Realized 7x speedups in the optimization framework by implementing a simple data caching mechanism
- Wrote a 4D linear algebra library to simulate view model transforms and camera projections
- Reduced optimization runtimes by 400x after migrating framework to C++11 (191 to .387 seconds)
- Integrated Google GTest to create test suite focused on unit and regressive testing

Texas Analog Center of Excellence, Machine Learning Research Intern January - May '19

- Created Python script to check for USB camera disconnection and sounds and alert to prevent camera data loss
- Provided thousands of ground truth images to train a network to discern eye gaze position by head position
- Allowed parallelization of C++ image processing software, reducing pipeline runtimes by 6 hours
- Developed a camera calibration algorithm to transform between coordinate frames within <3% error
- Designed Python scripts to automatically read, transform, and write CSV data as part of a data pipeline
- Used OpenCV and AprilTag (QR code-like) investigate the relationship between head-pose and driver gaze
- Unified 8 Python and C++ processes into in a single multithreaded data pipeline, increasing usability

Valencian Digital, Backend Architect & Developer May – October '18

- Designed the Node.js architecture, NoSQL Firestore database structure, and API communication schema
- Developed event listeners to trigger event-based business logic like rewards handling, blockchain tournament creation and termination, fantasy performance evaluation, and database CRUD
- Unit tested critical functions in a replica environment with a test database and localhost server
- Web application was setup within a short time frame and minimal cost base considering the complexity

Amazon, AWS Identity, SDE Intern May '19 – Present

- Designing a flexible search functionality in AWS Organizations that allows for search by a variety of features

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Software Projects

American Sign Language to English Translation

January – April '18

Computer Vision & Machine Learning Research

- Worked with a team of 5 to develop a full-stack app that extracts and translates American Sign Language symbols to English alphabet from a webcam using Python with OpenCV and Keras
- Explored and evaluated different features extraction methods including real-time contour segmentation and foreground/background recognition using OpenCV
- Designed the final project architecture and data flow between the convolutional neural networks and the Django/Flask front-end webpage

Engineering Projects in Community Service

January – October '18

Project Leader, React Native Developer, Backend & Database Architect

- Designed and implemented the first draft of a cross-platform mobile application to reduce wait times and streamline the appointment registration process for a 501(c)(3) using React-Native, MySQL, and PHP
- Wrote a PHP/MySQL backend server to allow users to sign up for appointments and preventing double-booking

Activities & Clubs

Dallas Blockchain Club Vice President: Designed flyers for club events. Communicated with other clubs including the entrepreneurship club and ACM to host joint technology events. Presented a workshop on using the Web3 - Python interface.

HackUTD Industry Coordinator: Actively communicated with industry contacts to raise \$5,000 for HackUTD Spring '19. Coordinated food distribution and judging for over 600 hackers.

AI Society Technology Coordinator: Presented workshop on using Scikit Learn for logistic regression, decision trees, and KNNs, available on GitHub.

Honors

Erik Jonsson Engineering Scholarship: Awarded twice after a holistic review consideration including academic merit

Mustang Technology Scholarship: Award due to academic merit

Phi Kappa Phi Honors Society: Maintained a GPA in the top 10 percentile among those with junior or senior standing

Computing Scholars Honors Society: Selective honors that only accepts 30 CS students in each year

Awards

UIL Regionals Qualifiers: Placed in the top 15 in the region in Computer Science, Mental Math, and Math after placing 2nd, 2nd, and 3rd, respectively, in districts

1st place at UTD Hacks for Humanity: Designed a "Yelp for accessibility" app using React Native that allows people to rate locations based their accommodation to those with disabilities. Uses Google Maps API to display the map and NoSQL Google Firebase to store the review data.

2nd place at T-Mobile Hacktober: Developed a novel application that summarizes conversations between service agents and customers using Google NLP and IBM Bluemix. Prevents the need for the customer to repeat themselves between representatives by storing and retrieving relevant information from previous interactions.

3rd place at Johns Hopkins' HopHacks: Built a social good app using React Native that allows communities to help themselves after natural disasters by allowing those less affected to offer available goods and donations, while allowing those more affected by the disaster to easily search for donations via keywords.