

# ARIF SYRAJ

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## EDUCATION

### University of San Francisco

*Master of Science, Computer Science*

**Relevant Coursework:** Principles of Software Development, Foundations of A.I.

San Francisco, CA

August 2023 – May 2025

### University of Illinois at Urbana-Champaign

*Bachelor of Science, Mechanical Engineering*

**Relevant Coursework:** Discrete Structures, Data Structures & Algorithms, Database Systems, Linear Algebra

Champaign, IL

August 2016 - May 2021

## TECHNICAL SKILLS

**Programming:** Python, Java, C++, JavaScript, HTML5, CSS3, SQL

**General:** Agile, Data Scraping, Data Analysis, RDBMS Design, Unit Testing, Multithreading

**Frameworks/Tools:** Linux, Docker, ROS, scikit-learn, MongoDB, React, Node.js, Express, JUnit

## EXPERIENCE

### Software Engineer

*EarthSense, Inc.*

March 2021 – August 2022

Champaign, IL

- Designed an algorithm to estimate plant height using noisy LiDAR data collected by our phenotyping robot, cutting error by >50% across datasets over the previous algorithm and beating accuracy of manual measurements.
- Revamped robot autonomy by designing a crash detection algorithm fusing LiDAR and odometry data collected from various environments, reducing overall false positives and negatives by 75%.
- Greatly decreased need for manual waypoint recording by implementing automatic waypoint generation on turns, saving customers several minutes per data collection and improving robot autonomy.
- Introduced a culture of documentation in our workflows for libraries and testing methodologies, which I later used to onboard interns for a summer.
- Extensively tested robot system functionality, standardized testing methodologies and created utility shell scripts, helping catch several system bugs before deployment to customers.

## PROJECTS

### Craigslist Apartment Scraper

July 2023

- A Python web-scraping script that enables a user to browse hundreds of ads for rental accomodation on Craigslist in a fraction of the time it would take to do so using the website.
- Scraped results are output to HTML files in a readable manner according to a list of user-specified constraints on commute time, rent, number of bedrooms, location, shared versus whole apartments, and more.
- Allows a user to easily see commute times to a specified location by foot, bike, and car. This data is queried from OpenStreetMap and can be used to sort listings according to travel time buckets by a chosen mode of transport.

### Mindset

November 2023

- A wellness web-app with a task management system to help users track and quit addictions, track nutrition, sleep quality and focus on work.
- Group project where we used Node.js with Express to set up the server, Passport.js and Google OAuth2 for authentication, and Mongoose to store user data.

### Reddit Product Scraper

March 2021

- Solo project to find specific products being re-sold on Reddit subreddits to get them at a discount.
- Leveraged the Reddit API to scrape thousands of posts per minute to find relevant products and deliver them to the user in a readable fashion.
- Personally saved \$150 on \$500 worth of purchases.

## AWARDS/PUBLICATIONS

### University of San Francisco Computer Science Scholarship - Merit Based Award

May 2023

### EnterpriseWorks Top Summer Intern Award

July 2021

- Was awarded the top summer intern award for the 'Best Technical Innovation' category by the EnterpriseWorks Incubator.