

Ibrahim Tayeb

US Citizen | 510-298-7759 | ibrahimtayeb30@gmail.com | [linkedin.com/in/ibrahimtayeb](https://www.linkedin.com/in/ibrahimtayeb) | github.com/IbrahimTayeb

EDUCATION

University of Illinois Urbana Champaign

Urbana, IL

Bachelor of Science in Computer Science, Minor in Statistics

Expected Graduation: May 2027

- GPA: 4.0/4.0
- Relevant Coursework: Data Structures, Programming Logic & Technique, Advanced C++ Programming, Python Programming, Java Programming, Linear Algebra, Discrete Math

EXPERIENCE

Robotics Software Engineer

August 2023 – Present

University of Illinois Urbana Champaign

Urbana, IL

- Collaborated with multidisciplinary team of 20+ students to develop fully functional robot focusing on autonomous excavation of lunar regolith utilizing Robot Operating Software
- Developed control algorithms in C++ and Python for autonomous navigation and obstacle avoidance using SLAM toolbox, improving the robot's efficiency in regolith excavation by 25%
- Integrated LIDAR, cameras and motor control systems with raspberry pi, enabling more precise movement
- Conducted iterative testing and troubleshooting, utilizing simulations with Gazebo, reducing system errors by 20%

Software Engineer Intern

May 2024 – Aug. 2024

Amway

Grand Rapids, MI

- Designed and developed an internal web application using ASP.NET, HTML, CSS, JavaScript (frontend), and C#, SQL Server (backend) to streamline the process of retrieving shipment pallet stacking schematics
- Leveraged MS SQL Server to handle data storage and retrieval, allowing engineers to efficiently filter results based on specific criteria, improving decision-making and reducing shipment preparation time by 30%
- Collaborated closely with packaging engineers to ensure the application met user requirements, enhancing usability
- Followed the complete software development life cycle and adhered to best practices, including git version control and agile methodologies, to bring the project from concept to production in a timely manner
- Utilized Windows web server, DNS, and IIS to host application, ensuring company-wide access and scalability

PROJECTS

Sentiment Analyzer | *Python, NLTK, TextBlob, Scikit-Learn, TensorFlow*

- Developed application capable of analyzing sentiment of tweets, reviews, or comments using multiple technologies
- Built a traditional machine learning model using scikit-learn, incorporating a pipeline with CountVectorizer, TfidfTransformer, and Multinomial Naive Bayes classifier, achieving high accuracy in sentiment classification
- Developed a deep learning model with TensorFlow, employing LSTM layers for advanced sentiment prediction, resulting in robust performance on complex datasets

Finance Tracker Web App | *Flask, SQLAlchemy, SQLite, HTML, CSS, Bootstrap, Jinja2, Chart.js*

- Developed application for tracking expenses, incomes, category management, and monthly budget planning
- Utilized Flask and SQL for financial data storage and built responsive frontend with Flask-WTF for form handling
- Created dynamic and interactive financial visualizations using Chart.js and user-friendly templates with Jinja2
- Integrated real-time data entry and visualizations for financial insights and budget tracking

Calendar App Tracker | *Python, API, Scripting*

- Utilized Google Calendar API to log time spent on target applications; authenticated using OAuth2.0
- Employed psutil to detect the active window and track when a specified application is in use
- Automatically generated calendar events capturing the start and end times of application usage

TECHNICAL SKILLS

Languages: Python, C++, Java, C#, JavaScript, HTML/CSS, SQL

Frameworks: React, Express, Angular, Node.js, Flask, .NET, ROS2

Developer Tools: Git, GitHub, Bitbucket, MongoDB, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, MS SQL Server, Linux (Ubuntu 22.04), Postman, Jupyter Notebook

Libraries: Pandas, NumPy, Matplotlib, NLTK, Scikit-Learn, TensorFlow, PyTorch, PyGame