

# Shubham Akhilesh Singh

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## SKILLS AND CERTIFICATIONS

- **Languages:** Python, JavaScript, TypeScript, Java, C, C++.
- **Web Technologies:** FLASK, Django, Angular, Node.js, SwiftUI, REST API, HTML5, CSS3.
- **Analytics/Database:** Pandas, MySQL, PostgreSQL, MongoDB, AWS (S3, EC2, RDS).
- **Testing and CI/CD:** Pytest, Jenkins, Docker.
- **Version Control:** Git, GitHub, Bitbucket.

## EDUCATION

**University of Southern California, Viterbi School of Engineering**  
Master's in Computer Science. GPA 3.85/4.0.

**Los Angeles, CA**  
**Jan 2021- Dec 2022**

**Thadomal Shahani Engineering College, Mumbai University**  
Bachelor of Engineering in Information Technology CGPA of 9.33/10.  
**Honors:** Principals Award of Excellence for consistent performances in academia, Department Ambassador for vital contributions.

**Mumbai, India**  
**Aug 2015-June 2019**

## EXPERIENCE

**Zugz Inc.**

**Los Angeles, California**

**Software Engineering Internship** [Python, Flask, MySQL, Elasticsearch, AWS S3, MongoDB, JavaScript]

**June 2022-Dec 2022**

- Develop, implement, test software for crawling web, storing, and indexing in agile environment.
- Design autocompletes and Search functionality by indexing 5.3m data in OpenSearch along with Elastic Search queries.
- Incorporate Flask API endpoints to facilitate new features and assisting front-end to display JSON data easily.

**USC's Information Science Institute (ISI)**

**Los Angeles, California**

**Python Research Assistant** [Python, Beautiful Soup, Linux, NLP, MongoDB, Knowledge Graph]

**Jan 2022-May 2022**

- Leveraged Facebook's Paper on "Database Reasoning Over Text" to expand on Wikipedia's info box section.
- Scraped 1 million Wikipedia pages to create a MongoDB training database.
- Utilized knowledge graphs from Knowledge Graph Toolkit (KGTK) to fill Neural QA over Wikipedia text.

**Accenture India**

**Mumbai, Maharashtra**

**Associate Software Engineer** [MySQL, Flask, Python, Java, JavaScript, JIRA, GitHub, Selenium]

**Sep 2019-Dec 2020**

- Built web applications and software using REST APIs, third-party integrations, and MySQL database.
- Analyzed business requirement needs with scrum master to come up with new endpoints to satisfy the requirements.
- Performed unit testing for Accenture Life Insurance Platform (ALIP) by writing automation scripts.

## ACADEMIC PROJECTS

**Stock Market Portfolio Application** [Angular, NodeJS, REST API, HTML, CSS, TypeScript]

**Mar 2022**

- Created a web application to look for a stock, buy a stock, sell a stock, and mark it as favorite with use of Finnhub API.
- All UI/UX components were structured on Angular as frontend framework improving speed and performance.
- Node JS was used to facilitate backend, making it a high-performance real-time full stack application.

**Mood Analysis of Song based on Lyrics** [NLP, Python, Beautiful Soup, Spacy, Pandas]

**Oct 2021**

- Explored three NLP model architectures LSTM, Bi-LSTM, and CNN, yielding an overall F1 score of 69 percent.
- Compiled an automation crawler to extract song lyrics from Genius API for 43k songs to improve dataset.
- Established a system capturing a song's lyrics to forecast a song's mood based on four quadrants of Thayer's model.

**Chrome Extension for Automatically Generating Image Annotations** [Python, JavaScript, Flask, NLP]

**Jan 2019**

- Replaced last layer of Resnet152 pre-trained model with an LSTM to generate text trained on MS COCO dataset.
- Modeled a browser plugin to gather all images from a page and render captions using Flask API calls.
- Text-to-speech capabilities for annotations has been enhanced, enabling visually challenged users to view websites with images.

## ACTIVITIES

- Won 2<sup>nd</sup> Prize for "Generating Image Annotations" project in annual Intercollege Project Expo.
- Unified a team of 3 to visualize a mobile app in Rajasthan Hackathon a nationwide event.