### Zahab Jahangir

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## **Objective**

Aspiring backend developer with a strong foundation in software development, problem-solving, and project management. Seeking opportunities to apply my technical skills, contribute to innovative projects, and grow within a dynamic organization.

#### Education

## **Bachelor of Science in Computer Science**

FAST University, Karachi (Expected Graduation: 2026)

Relevant Coursework: Software Engineering, Artificial Intelligence, Deep Learning, Data Structures, Object-Oriented Programming, Operating Systems, Database, and Algorithms

#### **Certifications & Courses**

• Backend Development Certification – FreeCodeCamp (View Certificate)

## **Technical Skills**

- Programming Languages: Python, JavaScript, C, C++
- Frameworks & Tools: Node.js, React.js, Flask, FastAPI
- Databases: MongoDB, MySQL
- APIs & Integrations: Google Places API, OpenWeatherMap API, Foursquare API, OpenStreetMap API, Open Library API
- Al & Machine Learning: YOLOv8, Deep Learning, Image Recognition
- Version Control: Git, GitHub
- Other Skills: Software Engineering Process Models, Agile Development

## **Projects**

#### 1. TripSync - Al-Powered Itinerary Management System

- Developed backend APIs and integrated Google Places, Foursquare, and OpenWeather APIs.
- Implemented Al-based tourist recommendations and itinerary planning.

## 2. Oblivion – Al based Detective Mystery Game

- Developed a Flask-based API to facilitate seamless backend-frontend communication, enabling efficient data handling and dynamic game interactions
- Implemented advanced AI algorithms, including Bayesian networks for probabilistic reasoning, Constraint Satisfaction Problems (CSP) for puzzlesolving, heuristics for optimized decision-making, and reinforcement learning to enhance adaptive NPC behaviors and gameplay strategies.

## 3. Peer-to-Peer (P2P) File Sharing System

- Implemented decentralized file sharing using Python/Java, Sockets, and Flask.
- Developed peer discovery via socket programming and secure file transfer.

## 4. BookVerse - Book Management & Recommendation Platform

- Developed a platform for users to explore, search, and organize books.
- Implemented user profiles with reading progress tracking and a personalized book collection.
- Integrated Open Library API to fetch and display books in an interactive UI.
- Integrated a badge system to reward users based on the number of books read.

#### 5. Graph Shortest Path Algorithms - Dijkstra & Bellman-Ford

- Implemented the Bellman-Ford algorithm to handle negative weights and detect negative cycles.
- Enabled user input for graph file selection and source node specification.
- Displayed shortest distances from the source node to all other vertices.

## 6. WordPress Website Cloning

- Cloned popular websites like Facebook using WordPress for frontend practice.
- Customized themes and layouts to match the original UI/UX.
- Gained experience in working with WordPress plugins and website customization.

# **Experience**

No professional experience yet, actively working on personal and academic projects.