

Find It – Find Your Belongings" is a Smart, Web-Based Tracking System. the Platform is Designed to Help Users Locate Their Lost or Misplaced Items by Integrating Real-Time Tracking Features with a Responsive and User-Friendly Interface.

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Abstract: In the digital age, the loss and misplacement of personal belongings remain common challenges. This research presents "FindIt," a web-based application designed to assist users in reporting, locating, and reclaiming lost items. Developed using ReactJS for the frontend and Django for the backend, FindIt leverages a modern technology stack to ensure a responsive, scalable, and user-friendly experience. The system incorporates real-time updates, geolocation tagging, and community-driven item reporting. This paper discusses the system architecture, implementation strategies, and evaluates the application based on usability, performance, and security.

Keywords: Lost and found, web-based Application, Geolocation, user Interface, REST API, PostgreSQL, Community Platform, Agile Development, JWT Authentication, Axios, Google Maps API.

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I. INTRODUCTION

Misplaced and lost items create daily inconveniences, particularly in shared spaces such as schools, universities, public transport, and offices. Existing solutions often lack integration and user-friendly interfaces. FindIt aims to bridge this gap by providing a seamless platform that enables users to post and search for lost items efficiently [1].

➤ Objectives

- Develop a web-based system for reporting and retrieving lost items.
- Use ReactJS to build an intuitive and responsive user interface [2].
- Implement Django for secure, scalable, and efficient backend processing [3].
- Enable geolocation and category-based searching.

- Foster a community-driven ecosystem for lost-and-found services.

II. LITERATURE REVIEW

Existing platforms such as Craigslist and Facebook Marketplace offer basic item listings but lack dedicated support for lost-and-found functionalities. Studies highlight the need for specialized platforms with structured categorization, search filters, and community validation [1], [4]. Modern web technologies such as ReactJS and Django have proven effective in rapid application development and provide support for modular, maintainable codebases [5], [6].

➤ System Design and Architecture:

The application follows a Model-View-Controller (MVC) architecture:

- **Frontend (ReactJS):**

Modular components for item submission, browsing, filtering, and user profile management. Uses Axios for API communication [7].

- **Backend (Django):**

REST API built with Django REST Framework. Handles user authentication, item management, image uploads, and notifications [6].

- **Database:**

PostgreSQL used for relational data storage [8].

- **APIs:**

Google Maps API for location tagging and filtering [9].

➤ **Features:**

- User registration and authentication (JWT-based) [10].
- Item listing with images, categories, and location tags.
- Search and filter by item type, location, date, and keywords.
- Admin dashboard for moderation and analytics.
- Notification system for matched/reclaimed items.

III. IMPLEMENTATION

The application was developed in an Agile environment over five development sprints [11]. CI/CD practices were followed using GitHub Actions [12]. The frontend was deployed using Vercel [13], and the backend on Heroku [14].

➤ **Evaluation and Results:**

User testing was conducted with 50 participants. Key findings:

- **Usability:** 92% found the interface intuitive [4].
- **Performance:** Average response time was 180ms for API calls.
- **Security:** Implemented CSRF protection, HTTPS, and secure user authentication [15].
- **Scalability:** Load tested up to 500 concurrent users without performance degradation.

IV. CONCLUSION

FindIt successfully addresses the problem of lost belongings through a community-based web platform. By using modern technologies like ReactJS and Django, the application ensures a high-performance and user-centric experience. Future work will include mobile app development, AI-based item recognition, and multilingual support.

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