

Graduation Project - English Abstract

Project Code:	AI:22
Project Title (in English):	Catch The AI
Project Title (in Arabic):	نظام كشف الوسائط المولدة بواسطة الذكاء الاصطناعي
Program Name:	Artificial Intelligence
Supervisor(s):	Prof. Eman Abdel-Latef
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Project Abstract

The proliferation of artificial intelligence (AI) has led to significant advancements in media generation, resulting in an urgent need to distinguish between human-created and AI-generated content. This project, "AI-Generated Media Detection," addresses this challenge by developing a robust and scalable system capable of accurately identifying AI-generated media. The system architecture follows a modular client-server model, ensuring flexibility, maintainability, and scalability with RESTful APIs. The frontend, built with React.js and Bootstrap, provides an intuitive interface for users, while the backend, implemented with Django, handles business logic, data management, and integration with deep learning models hosted on cloud infrastructure. Key components include secure user authentication via JWT, media detection APIs, and profile management functionalities. The deep learning models leverage state-of-the-art techniques to analyze and classify media, supported by extensive preprocessing and data augmentation to enhance model accuracy. The deployment strategy employs Docker and Nginx for containerization and load balancing, ensuring a resilient and high-performance application. This project not only contributes to the field of AI and media forensics but also offers practical tools for individuals and organizations to safeguard against the misuse of AI-generated content.