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Subject:

**A Web Platform to Improve
Doctor-Patient Interaction and Digitize
Healthcare Services**

Master's Degree Final Year Project

Specialty: Data Engineering and Web Technologies

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Abstract

This thesis presents **Medicare**, a complete web-based healthcare platform that supports doctor-patient communication and manages all appointment arrangements. The platform has been designed with a user-friendly front-end interface that makes finding doctors, scheduling appointments, and reviewing medical records straightforward. Healthcare providers can also manage their schedules, keep patient records updated, and apply for a provider profile through the application. From a technical standpoint, the web platform has been developed using modern technologies (React.js for the front-end and Django REST Framework for the back-end) according to current best practices for creating secure, scalable architectural solutions. Key features include appointment management, patient medical history access, doctor search by specialty, AI-powered preliminary diagnosis.

Keywords: e-health, web platform, doctor-patient interaction, artificial intelligence

Résumé

Ce mémoire présente **Medicare**, une plateforme de santé complète basée sur le web, conçue pour faciliter la communication entre les médecins et les patients ainsi que la gestion des rendez-vous médicaux. La plateforme a été développée avec une interface utilisateur conviviale permettant de rechercher des médecins, de planifier des rendez-vous et de consulter facilement les dossiers médicaux. les medecins peuvent également gérer leurs emplois du temps, mettre à jour les informations des patients et demander la création d'un profil professionnel via l'application. D'un point de vue technique, la plateforme web a été développée à l'aide de technologies modernes (**React.js** pour la partie front-end et **Django REST Framework** pour la partie back-end) en suivant les bonnes pratiques actuelles afin de garantir une architecture sécurisée, performante et évolutive. Les principales fonctionnalités incluent la gestion des rendez-vous, l'accès à l'historique médical des patients, la recherche de médecins selon leur spécialité.

Mots-clés : e-santé, plateforme web, interaction médecin-patient, intelligence artificielle

الملخص

تقدم هذه المذكرة Medicare، وهي منصة صحية متكاملة قائمة على الويب، تهدف إلى تسهيل التواصل بين الأطباء والمرضى وإدارة المواعيد الطبية بشكل فعال. تم تصميم المنصة بواجهة استخدام سهلة وبديهية تتيح للمستخدمين البحث عن الأطباء، حجز المواعيد، والاطلاع على السجلات الطبية بكل سهولة. كما يمكن للأطباء إدارة جداولهم الزمنية، وتحديث بيانات المرضى. من الناحية التقنية، تم تطوير هذه المنصة باستخدام تقنيات ويب حديثة (React.js في الواجهة الأمامية وFramework REST Django في الواجهة الخلفية)، وفق أفضل الممارسات الحديثة لضمان نظام آمن، قابل للتوسع، وذو أداء عالٍ. تشمل الوظائف الأساسية إدارة المواعيد، الوصول إلى التاريخ الطبي للمرضى، البحث عن الأطباء حسب التخصص، إضافة إلى نظام تشخيص أولي مدعوم بالذكاء الاصطناعي.

الكلمات المفتاحية: الصحة الإلكترونية، منصة ويب، التفاعل بين الطبيب والمريض، الذكاء الاصطناعي.

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