

Elena Pan

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SKILLS

LANGUAGES: TypeScript • JavaScript • Python • C# • C/C++ • Kotlin • Java • HTML/CSS

TECHNOLOGIES: Node.js • React • MongoDB • Express.js • Flask • Angular • .NET Core • GCP • Firebase

EXPERIENCE

SOFTWARE DEVELOPER INTERN, LocalIntel | May 2021 – Aug 2021

- Generated vector tiles and used GIS mapping to render spatial population data in MapboxGL
- Built embedded dashboards in Angular for clients to monitor key economic indicators
- Developed analytics API to track embed visits and generate daily performance reports with .NET Core

ANDROID DEVELOPER, Women Empowerment League | Jul – Sep 2020

- Worked with the CEO to design an open-sourced Android app currently used by all staff and clients, with an appointment booking system, real-time chats, and user management
- Engineered core product using MVVM architecture and databinding with Kotlin and Android Jetpack, integrated with a Firebase backend
- Implemented user anonymity to protect client identities by censoring names

SOFTWARE ENGINEERING INTERN, The Energi Simulator | Nov 2020 – Apr 2021

- Created a Unity application to render reservoir data in VR by generating meshes for 3D VTK data
- Developed a neural network in Keras to optimize mapping of oil porosity and saturation to colours
- Implemented clustering algorithm to detect regions of interest and anomalies in reservoir geospatial data

WEB DEVELOPER, DreamCatchers Foundation | Jun – Aug 2020

- Created WordPress plugin to automate matching seniors with volunteers, reducing operation time by 50%
- Designed an algorithm in PHP to pair volunteers with seniors based on personal criteria from MySQL db

PROJECTS

FITSPIRE | EXERCISE TRACKER ↗

- Published full-stack web app for fitness tracking using MERN
- Designed a Cronjob on the server to send scheduled fitness challenges to users
- Implemented bearer authentication, email verification, and form validation

COVID CONNECTIONS | Hack the North ↗

- Built a full-stack Android app to keep track of COVID-19 cases and exposures in a user's network graph
- Engineered Node.js REST API with MongoDB cloud database and implemented JWT bearer authentication
- Leveraged Context to track authentication state in React Native and integrated network requests

EDUCATION

UNIVERSITY OF WATERLOO, Candidate for Bachelor of Software Engineering (2020 – 2025)