# HAMZA CHERQAOUI

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## EDUCATION

**Greencastle, IN** **DePauw University** **August 2019 - May 2023**

**Major:** Computer Science & Mathematics, B.A, **(GPA:** 3.65)

**Minor:** Data Science

**Relevant coursework:** Object-Oriented Software Development, Data Structures, Foundations of Computation, Computer Graphics, Computer Systems, Data Mining, Artificial Intelligence, Linear Algebra.

## SKILLS

Languages: *(proficient)*: C, C++, Python, Java, Go, SQL *(familiar)*: JavaScript, HTML/CSS, Swift, Unix, Git

Tools & Frameworks: React, Node.JS, GitHub, Android Studio

## EXPERIENCE

**Mobile Developer, Intern** **CodePath** **February-April 2021**

- Developed native Android applications and frameworks using Java and Kotlin.
- Integrated third party libraries including Android Async HTTP and Glide and utilized REST APIs.
- Wrote elegant, self-documenting code, easy to read and adapt for other developers.
- Tested code for robustness; executed edge case, usability, and general reliability analysis.

**Software Developer, Intern** **TSAW Drones** **June-August 2019**

- Debugged an average of 100 lines of code per day, solving approximately 20 problems every week.
- Wrote reusable unit tests to ensure quality control resulting in a 30% reduction of user bug tickets.
- Worked alongside senior employees to upgrade features in the company's website.
- Focused on user experience design to meet users' needs head-on by working with the UI/UX team.

## PROJECTS

**Parstagram: An Instagram Clone** GitHub | View Project

- Developed an Android App using Java/XML that allows users to share photos and videos online similar to Instagram.
- Utilized Parse for object and file storage, integrated Glide for file caching and ASync HTTP for JSON parsing.
- Optimized the UI by implementing fragments, infinite scrolling and including a custom Bottom Navigation View.
- Utilized: Java, XML, Caching, Cloud Storage, Local Persistent Data, Android Studio, Parse Platform.

**Machine Learning Predictive Model (PricePredict)** GitHub | View Project

- Built a Nearest-Neighbor Class Model using Python that predicts housing prices using Zillow's House Price Dataset.
- Implemented k-fold cross validation using Linear Regression and implemented data pre-processing.
- Applied Data Mining to predict housing prices up to 90% accuracy using Gradient Boosting in Scikit-learn.
- Utilized: Python, Pandas, NumPY, SkLearn, Machine Learning, Data Cleaning, Classification, Prediction, (IDE: Spyder).

**Flixster: A Movie Browsing App** GitHub |View Project

- Developed an Android App using Java that allows users to browse movies by integrating the Movie Database API.
- Implemented RecyclerView placeholders to efficiently parse JSON data and utilized AsyncHTTPClient and Glide.
- Added movie trailers in separate Fragments by integrating the YouTube Android Player API and enhanced the UI.
- Utilized: Java, XML, Caching, Cloud Storage, Local Persistent Data, Movie Database API, YouTube Android Player API.

**Graphics Software Rasterizer (HamzaGL)** GitHub | View Project

- Built a Software Rasterizer using C++ following the graphics pipeline that features Ray tracing and Ray casting.
- Implemented triangle rasterization, perspective correct interpolation, texture mapping and model loading.
- Utilized: C++, Rasterization, Rendering Techniques,low-level optimization, (IDE: Visual Studio Code).

## LEADERSHIP & AWARDS

**Computer Science Honor Society** | DePauw University **April 2022**

**Hack MIT Hackathon** | Massachusetts Institute of Technology **September 2021**

**PennApps XXI Hackathon** | University of Pennsylvania **September 2020**