Chinhnam Nguyen

Software Engineer

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EDUCATION

University of Maryland, College Park | B.S. in Computer Science, B.S. in Statistics

- Dual Degree, Sigma Phi Delta Engineering Fraternity
- Courses: Object-Oriented Programming II, Discrete Structures, Intro to Computer Systems, Programming Languages, Algorithms, Intro to Data Science, Handheld Programming, Intro to Machine Learning, Computer Vision, Network Security, Calculus III, Differential Equations, Linear Algebra for Engineers, Applied Probability and Statistics, Applications of Linear Algebra, Advanced Calculus I, SAS Computing, Numerical Methods, Sampling Theory

SKILLS

Languages: Java, Python, C++, C#, Javascript, Typescript, Kotlin, SQL, HTML, CSS, Sass Frameworks/Libraries: React, Redux, Next, TensorFlow, Flask, SQLAlchemy, Vue, Hadoop Miscellaneous: Docker, Machine Learning, MVC, Data Analysis, REST APIs, Relational Databases, Middleware Handlers

WORK EXPERIENCE

Lead Software Engineer

Terrapin Works | University of Maryland, College Park

- Developed a **React** app with a **Flask/SQLAlchemy** backend that manages thousands of university users and machines.
- Utilizes UMD's API to access user credentials in order to check permissions and streamline the user experience.
- Developed a system of relational databases of machines, users, and user and lab permissions to efficiently store data. June 2023 - Aug. 2023

Software Engineer Intern

Mastercard | New York, NY

- Developed a Next.js dashboard that pulls team commit data from Bitbucket and Rally API and exposes hidden data such as most targeted repositories, types of commits being made, as well as commit messages and times.
- Developed a dependencies tracker that shows the most out of date dependencies across all repos using the npm API.
- Developed on Mastercard's client-facing checkout initiator on team Krypton, responsible for SRCi.

Software Engineer Intern

Mastercard | Arlington, VA

- Worked on the Data Ingest Mapping team, implementing data model and code changes to the DSM web platform to streamline the process of creating tables and adding clients while accommodating filters.
- Performed full-stack development by working on the backend (C#) and frontend (React/Redux/TSX) of the platform, such as editing pages as well as pushing DbUp scripts to edit existing databases. June 2021 - Aug. 2021

Database Engineer Intern

- Mastercard | Remote/O'Fallon, MO
 - Worked with personal deployments of Hadoop clusters and Cloudera Manager API to collect cluster data.
 - Wrote a Python script to automate the scraping of the API to collect metrics that could be formatted and sent to customers or execs at their request.

PROJECT EXPERIENCE

chinhnam.dev - chinhnam.dev

- Personal website that showcases my internship/work experiences, projects, as well as film essays.
- Developed using **React** and **Javascript React** as well as **HTML/CSS**, and hosted using Netlify.

Analysis on Hero Composition in Professional Overwatch - chinhnam-n.github.io/OverwatchAnalysis/

- Analyzed datasets of hundreds of thousands of samples of professional Overwatch provided by Blizzard to create an optimal hero composition for each gamemode/map to maximize the opportunity of a win.
- Used fundamental data science libraries such as pandas, sklearn, numpy, matplotlib, and more, in order to graph win rates for each player, determine overall player efficiency, and find the heroes favored by the most efficient players.
- Performed both linear and non-linear regressions to predict win-rates based on hero composition and map pick.

Seefood App - github.com/agolikov28/SeeFood

- Developed an Android app used to track daily macros and dietary targets using Kotlin and Android Studio.
- Includes a computer vision algorithm that can scan nutrition labels and recognize digits in order to automatically input and store values and a "macros calculator" that calculates daily dietary expectations based on the user's body metrics.

RESEARCH EXPERIENCE

Risk-Aware Path Planning for Ground Vehicles using Occluded Aerial Images

January 2022 - September 2022

RAAS Lab | University of Maryland, College Park

Assistant researcher to PhD candidate Vishnu Sharma, advised by Professor Pratap Tokekar, researching the use of computer vision to aid in movement-pathing for robots. View here: https://arxiv.org/pdf/2104.11709.pdf

Used AI2-THOR to model physical scenes and test depth-perception using point clouds and machine learning.

Expected May 2024

January 2022 - Present

June 2022 - Aug. 2022