Zachary Collins

Developer with 7 years of Programming experience and a passion for creating
Portfolio: thezacharycollins.com | Github: github.com/Zachary-collins7

Top Skills

- **Programming Languages:** Python | Typescript | Swift | PHP
- **Framework/Platforms:** NextJS | ReactJS | SwiftUI | Laravel | .NET
- **Databases:** MySQL | MsSql | MongoDB | MariaDB | Sqlite3

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Professional Experience

Comcast – Python Developer III – Contract
Durango, CO
Aug 2022 - Aug 2023

- Designed and developed a Python-based program to connect to a diverse array of over 10,000 database servers - all of various types including mysql, mssql, Oracle, and Teradata. This effort yielded valuable analytics about database functionality, user access, and credential verification. Notably, the resulting web application empowered Data-Auditors to efficiently pinpoint tables for deeper analysis, saving significant time that was previously lost to firewall challenges and manual interactions.

- Lead the creation of a Python library dedicated to web automation testing, overseeing its development to evaluate the operational integrity of an in-house web application Engineered with a strong focus on programmer accessibility, the library was thoughtfully architected utilizing many design principles that contributed to its robustness. Among these principles, the builder pattern stands out, as it allowed for a simple interface which made the library fast to pick up and tests built with it easy to read.

- Actively engaged and collaborated with fellow team members across teams to resolve various operational challenges as they surfaced, highlighting my strong aptitude for collaborative problem-solving and contributing to a harmonious team environment.

— Python
— Selenium
— EC2
— Mysql
— MongoDB
— S3
— Oracle
— Postgresql
— DynamoDB
— Teradata
— Redis

Expert Ready – Developer
Tulsa, OK
Sept 2019 - Oct 2020

- Designed and implemented an event processing system that eliminated monthly bugs and unified system management. The system provided an 80% reduction in support tickets and a traceable log of events which aided development and greatly improved the system's performance and reduced the number of support tickets.

- Developed a data generation tool to migrate data tables to streamline the customer's workflow. Streamlining reduced on-field table conversation and minimized user error.

- Migrated customers to new deployment environments. Learned and applied the end-to-end process of developing and deploying a web application.

— Laravel
— PHP
— Docker
— .Net
— K6

ITRS Group – Intern
Tulsa, OK

May 2019 - Sept 2019

- Head of Global Strategy mentored me about product competition and the Gartner Magic Quadrant. Created "battle cards" comparing our product with competitors.
- Designed and implemented a Nagios compatible plugin for OP5 Monitor. Utilized command-line options and comprehensive exception handling.
- Created a scalable Docker stack implementing Nginx for load balancing containers running web servers.

——— Python

——— Bash

— Nagios API

——— Web API

Samp Innovations – Consultant
Tulsa, OK

May 2019 - July 2019

- Worked on a .NET application to create a web form with client-side validation and inserted that data into an SQL database.

——— .Net

——— JS

Oklahoma Aquarium – Consultant
Jenks, OK

Feb 2019 - Jun 2019

- Designed and developed a mobile app for people touring the aquarium. Presented information about each fish through quizzes and prompts.

——— Swift

— Objective C

Personal Projects

Discord Bot

Feb 2023

- Created a discord bot to connect users of a game to resources and tools provided by the game and the community.
  With over 1,400 daily users, I focused on making the bot as efficient and fast as possible while still providing a great user experience.
- The bot uses Selenium to scrape the game's website and uses Google Translate and GPT-3 to translate the information into the user's language.
- Detailed logs are kept for each user to help with debugging and to provide insight into how the bot is being used. Logs are queried, sorted, and displayed in a dashboard for easy viewing.

——— Python

——— GPT-3

——— Selenium

— Discord-api

——— Mysql

Portfolio Website

May 2022

- Deployed using NextJS static site generation to Github Pages (uses a work-tree deployment branch alongside the main branch)
- The Site features a fully decked-out SEO, color themes, and Google Analytics.
- Uses SCSS modules to prevent CSS class-name collisions.
- Uses typescript for live type-checking and to give confidence in deployed code.

——— NextJS

——— ReactJS

— Typescript

——— SCSS

——— NPM

Robotics Experience

Robotics Experience – Team Leader/Lead Programmer

2017 - 2020

- Lead FTC team 11572 - a team of 10 to design and create a robot.

——— Java

- Competed at the world level against 70+ countries. ——— Python
- Independently learned and applied control systems to autonomously complete challenges. ——— CAD

MIT – Robotics Workshop *2018*

- Completed a prerequisite programming/Linux course and was invited based on merit. ——— Python
- MIT Department leads and partnered technology corporations mentored us through various control systems and technologies. — TensorFlow ——— ROS
- Project-based learning allowed us to implement many modern technologies including Event, State, and SLAM architectures, PID controllers, IMU, Lidar, and Stereoscopic cameras.

Education

University of Tulsa	**Tulsa Community College**	**Home School**
Computer Science	Gen Eds	High School Diploma
Aug 2020 - May 2021	2018 - 2020	2016 - 2020