KONSTANTINOS GKOGKOS

Software Developer

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Motivated undergraduate computer scientist seeking an internship position to gain valuable experience and expand knowledge in the field of computer science.

Projects:

Car Rental Site

I successfully led the development of a comprehensive Car Rental Management System, leveraging the robust capabilities of SQL and JDBC for backend operations, paired with an interactive frontend interface. This project was designed to streamline the vehicle rental process, facilitating seamless transactions and inventory management. My role involved architecting the database schema, implementing complex SQL queries for data manipulation, and establishing secure JDBC connections to ensure reliable data transactions. On the frontend, I employed modern design principles to deliver a user-friendly experience that simplifies navigation and operations for both customers and administrators. The integration of backend and frontend components was meticulously managed to provide a cohesive and efficient application, significantly enhancing the car rental service's operational workflow.

Game Development and C++ DSL Project

I spearheaded an ambitious project to develop an engaging game, harnessing the power of C++ and a custom-designed Domain-Specific Language (DSL). My focus was on creating a unique gameplay experience that seamlessly integrates intuitive language commands to control game dynamics.

Antivirus System Project

Technology: C

Description: Developed an antivirus system in C designed to detect and neutralize malware. Implemented real-time scanning, signature detection, and heuristic analysis. Focused on optimizing performance and resource management in low-level system operations.

Compiler design

Technologies: Flex, Bison, C

Description: Developed a compiler that includes lexical analysis with Flex, syntax parsing with Bison, and intermediate code generation. Implemented a virtual machine in C to execute the compiled code, emphasizing optimization and efficient execution. Enhanced practical understanding of compiler construction and language processing.

Cryptography System Project

Technology: C

Description: Engineered a comprehensive cryptography application in C, spanning from basic

encryption techniques to complex cryptographic protocols. Focused on developing secure, efficient algorithms and understanding underlying mathematical principles.

Media and Contracts Management Platform

Technology: Python, Django, Azure, Kubernetes, RabbitMQ, Terraform

Description: Spearheaded the development of a Django-based backend for a digital media and contracts management platform. Integrated advanced features for handling large-scale media files, contract automation, and digital design workflows. Deployed on Azure using Kubernetes with RabbitMQ for message queuing, and utilized Terraform for infrastructure as code. Enhanced system accessibility and scalability with custom ingress/egress configurations. Also other technologies used gRPC/YAML files/github etc..

Stratego Board Game (Java with MVC Architecture)

Designed and developed a 1v1 Stratego board game in Java, utilizing advanced graphical user interface (GUI) and following the Model-View-Controller (MVC) architecture.

Created a menu system with options for different game modes, such as sudden death and rescue a pawn, enhancing the gaming experience.

Achieved a perfect score of 100/100, demonstrating exceptional proficiency in software design, development, and adherence to industry standards.

Tanks Unity Course (C#)

Completed an intensive Unity course focused on game development using C# programming language.

Developed a highly advanced game with a custom-made 3D layout, utilizing 3D vectors and captivating animations.

Implemented complex game rules, multiple game modes, scoring system, and winning announcements.

Achieved a perfect score of 100/100, showcasing expertise in C# programming, game design, and implementation.

MicroTCP Protocol Development

- Technology: C, UDP
- **Description:** Developed a client-server microTCP protocol using UDP to simulate TCP-like reliability and flow control mechanisms. Engineered in C, this project involved creating custom algorithms for packet loss handling, error checking, and data retransmission, demonstrating a deep understanding of network protocols and low-level programming.



Websites, Portfolios, Profiles





Skills

- API Development
- Postman API
- React.js
- Databases
- PostgreSQL

- Ingres
- YAML
- GraphQL
- Microservices
- ◆ gRPC
- CyberSecurity/Cryptography
- **▲** C
- **▲** C++
- Python
- Java
- Javascript
- Matlab
- **◆** C#
- Assembly

Work History

Sep 2023 - Back End Developer Dec 2023 QRealm

- Role Overview: Played a pivotal role in developing and managing a sophisticated backend system for a dynamic media and contract platform. Specialized in using Django to create responsive and secure APIs, contributing to the seamless integration of complex features such as digital media management and contract negotiation.
- **Key Technologies:** Employed a suite of modern technologies including Python, Django, Azure, Kubernetes, RabbitMQ, and Terraform, enhancing the platform's performance, scalability, and reliability.
- Impact: Ensured robust system architecture by implementing Kubernetes for deployment orchestration and RabbitMQ for efficient message queuing, leading to an optimized, fault-tolerant service delivery. Utilized Azure for cloud services and Terraform for automating infrastructure, significantly reducing downtime and improving user satisfaction

Education

Expected Computer Science in Jun 2025 University of Crete



German