

Michael Placzek

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SUMMARY

Software Engineer with a strong foundation in backend systems, systems programming, and full-stack development. Experienced in building performant applications in Java, Go, Python, and C++. Developed a custom heap allocator achieving ~3.5x performance improvement over the Windows allocator in benchmark testing. Passionate about building efficient, maintainable software systems.

SKILLS

Languages: Java, Python, Go, C++

Backend: REST APIs, Microservices, Authentication (JWT), Gin, GORM

Databases: PostgreSQL

Tools: Docker, Git, GitHub

Systems: Linux (Arch, Debian, Ubuntu, RHEL), Windows (10, 11)

WORK EXPERIENCE

Eli's Cheesecake Company

May 2023 – Aug. 2023

Information Technology Intern

Chicago, IL

- Increased Microsoft Secure Score by over 300% through targeted hardening and remediation efforts.
- Diagnosed and resolved network and system issues across 20+ production systems, improving uptime and reliability.
- Conducted security assessments and vulnerability analysis to strengthen infrastructure integrity.
- Implemented access control improvements and supported system upgrades across hardware and software environments.

PROJECTS

Dynamic Heap Allocator

C++

- Achieved ~3.5x performance improvement over Microsoft's allocator in a Windows x86 Release stress benchmark.
- Implemented a custom fixed-size heap allocator with next-fit search, block splitting, and bidirectional coalescing.
- Designed deterministic free-list management to reduce fragmentation and improve memory efficiency.

SkillSwap Web Project

Vue.js, Go, PostgreSQL, Docker

- Developed a full-stack web application for skill exchange, session booking, chat, and video sharing.
- Built RESTful backend services in Go using Gin and GORM for authentication and transactional workflows.
- Containerized the application with Docker and implemented test coverage for core features.

Asteroids Game

Python

- Developed an Asteroids-style game in Python with the Pygame module.
- Structured the codebase around modular sprite architecture to separate the player, asteroids, and projectiles.
- Improved maintainability by organizing the project into reusable components and clear object-oriented modules.

EDUCATION

DePaul University

Master of Science (M.S.) in Computer Science

Sep. 2023 – Jun. 2025

DePaul University

Bachelor of Science (B.S.) in Cybersecurity, minor in Computer Science

Sep. 2020 – Jun. 2023

Oakton Community College

Associate of Science

Sep. 2018 – Jun. 2020