Brian Yildirim

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EDUCATION

University of California, Irvine　　　　　　　　　　　　　　　　　　　　Irvine, CA
Bachelor of Science, Computer Science (Information Specialization)　　　　Sep. 2023 – Jun. 2027
Relevant Coursework: Advanced Python Programming, C++ as a Second Language, Software Engineering, Data Structures & Algorithms, Boolean Logic & Discrete Structures, Discrete Math for Computer Science, Linear Algebra, Calculus II, Statistical Methods for Data Analysis, Probability & Statistics for Computer Science, Requirements & Analysis Engineering

TECHNICAL SKILLS

- **Programming Languages**: Python, C++, JavaScript, TypeScript, SQL, HTML, CSS, Git
- **Frameworks/Libraries**: Flask, FastAPI, NumPy, CMake, React, Vite, Next, PostgreSQL, TailwindCSS, AWS (EC2, S3, RDS)
- **Spoken Languages**: English (native), Turkish (fluent), Spanish (novice)

WORK EXPERIENCE

Toros Tile　　　　　　　　　　　　　　　　　　　　　　　　　　　　Fairview, NJ
Software Engineering Intern　　　　　　　　　　　　　　　　　　　　Jun. 2025 – Sep. 2025

- Shipped backend features for a marketing email tool using website activity data to production, raising sales 14%
- Redesigned responsive UI and information architecture for the company website, lifting monthly traffic 8%
- Automated inventory and sales data cleansing with Pandas, cutting manual errors and accelerating reporting
- Collaborated weekly with marketing/operations in an agile cadence to prioritize features and fixes

PROJECTS

Rate Limiter Library | *C++, C API, CMake, Ninja, GoogleTest/Google Benchmark*　　Aug. 2025 – Sep. 2025
- Engineered sharded token-bucket limiter, achieving 7.4M ops/sec hot-key throughput, 135–260 ns operation latency
- Packaged C++ & C interfaces via CMake/pkg-config; find_package integration accelerates adoption
- Built GoogleTest + Google Benchmark suites and portable CI, ensuring deterministic performance

Image Quality Gate | *Python (FastAPI, OpenCV, NumPy, Pydantic), Docker, GitHub Actions*　Jul. 2025 – Aug. 2025
- Designed REST microservice for blur/brightness scoring; policy-driven thresholds reject unusable photos
- Optimized CPU path to 30–60 ms median, 80–120 ms p95 latency; sustained 100+ RPS throughput
- Instrumented Prometheus metrics for monitoring and Dockerized deploy with GitHub Actions CI/CD

Minecraft Enchantment Calculator | *Python, JavaScript, Tailwind,*　　　　　May 2025 – Jun. 2025
- Implemented Flask backend and vanilla-JS UI, computing optimal anvil plans in ≤20 ms with memoized search
- Encoded full 1.20 enchant data and incompatibilities, auto-validating selections to prevent invalid states
- Grew search visibility/SEO to 110k impressions, 5.5 average position within 3 months

Multi-Threaded TCP Server | *Python*　　　　　　　　　　　　　　　　Apr. 2025 – May 2025
- Developed a high-concurrency TCP server in Python featuring persistent key-value storage and thread-safe locking
- Integrated file persistence, custom command parsing, RLock synchronization, and robust error handling
- Implemented five protocol commands; zero dependencies and predictable cross-platform deployment

LEADERSHIP & ACTIVITIES

ESP Entertainment　　　　　　　　　　　　　　　　　　　　　　　Verona, NJ
Event Operations Crew　　　　　　　　　　　　　　　　　　　　　　Aug. 2025 – Sep. 2025

- Coordinated setup, operation, and teardown of inflatables and AV gear under tight timelines with safety-first practices
- Supervised kid rotations and managed queues; enforced fair play, timekeeping, and on-the-spot conflict de-escalation
- Communicated with organizers and vendors to adjust layouts and staffing, ensuring smooth event flow