

# Ehiane Kelvin Oigiagbe

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## Career Objective

Full-stack Software Engineer with hands-on experience building full-stack applications, writing scalable code, and applying software testing practices. Proficient in Python, JavaScript, C++, C#, SQL, and NoSQL(MongoDB), with a strong foundation in test-driven development.

## Education

**Washington State University – Pullman, WA**  
**Bachelor of Science in Computer Science – Cum Laude** **Graduated May 2025**

- **6x Dean’s List Academic Achievement Award Recipient, GPA: 3.63**
- **Relevant Coursework:** Advanced Data Structures & Algorithms, Programming Language Design, Computer Architecture, Object Oriented Design, Web Development, Database Management Systems, Neural Network Design, Artificial Intelligence.

## Skills

- **Programming Languages:** Python, C, C++, C#, JavaScript, Swift, Typescript, Haskell, XML, HTML, CSS.
- **Concepts:** Data structures and Algorithms, Scalability, OOP, Software Design Patterns, Agile Development.
- **Frameworks & Libraries:** Flask, React.js, Node.js, Express.js, .Net, SQLAlchemy.
- **Systems:** CI/CD Pipelines, API Development, Scalable Web Applications.
- **Databases:** SQL (PostgreSQL, MySQL), NoSQL(MongoDB), RDBMS.
- **Development & Tools:** Git/GitHub, Jira, Postman, Linux, PowerBI, REST APIs, Power Query (MS Excel).
- **Testing & Automation:** NUnit, Selenium, Cypress, Unittest, Pytest, GitHub Copilot, TDD (Test Driven Development)

## Work Experience

**Software Engineer** June 2025 – Present  
**Jeroyaf Accounting & Tax Service** Remote

- Automated bank statement processing using Python regex and pandas, implementing dynamic transaction classification with comprehensive unit testing for 100% accuracy across multiple financial formats.
- Built scalable PDF-to-Excel financial pipeline with automated transaction splitting and configurable output generation, reducing manual data entry by 70% and improving accounting workflow efficiency by 50%.
- Developed comprehensive testing framework for financial data processing using Python unittest with VS Code integration, increasing test coverage by 90% and reducing software bugs by 60%.

**Software Test Engineer Intern** September 2023 – December 2024  
**Schweitzer Engineering Laboratories Inc.** Pullman, WA

- Automated test script execution using C# and Python to validate embedded systems, increasing regression coverage **40%**.
- Engineered Power BI dashboard using Python and internal APIs to redesign Station Support Request (SSR) tool, improving data accessibility and reducing troubleshooting time by 20%.
- Converted legacy [2488](#) test scripts to in-house programming language automation modules, reducing maintenance time by 30% and increasing code reusability by 50%.
- Streamlined failure analysis discussions by leveraging internal APIs, reducing meeting duration by 5-10 minutes and increasing focused engineering time by 15%.
- Collaborated cross-functionally to investigate product issues and resolve test failures, reducing release cycle time by 25% and accelerating feedback loops by 40%..

**Cougar Card Center – Washington State University** **September 2022 – September 2023**  
**Clerical Assistant** **Pullman, WA**

- Provided frontline technical support for campus ID and account systems, resolving an average of 50 issues per day and maintaining a 98% customer satisfaction rate.
- Boosted customer satisfaction and ID card replacement sales by 10% through proactive communication and problem-solving.
- Reduced onboarding time for new employees by 50% by documenting support workflows and updating training materials.

## Projects

**Capstone Project: Milestone Inventory Tracking App | JavaScript, React, Express.js, MongoDB, Agile Methodology**

- Replaced legacy Excel-based system with a full-stack SaaS application to track adaptive equipment for residents with developmental disabilities, improving data accuracy and reducing tracking errors by 40%.
- Engineered RESTful APIs and modular frontend React components to streamline inventory workflows, enhancing user efficiency by 30%.
- Implemented comprehensive automated testing suite using Jest, Cypress, and Supertest, increasing test coverage by 90% and reducing post-deployment issues by 60%.
- Automated CI/CD pipelines with GitHub Actions, reducing deployments time by 60% and improving development velocity.

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**Hackronomics – AI-Powered Financial Assistant** | **JavaScript, Typescript, React, Express.js, three.js, MongoDB, OpenAI**

- Developed award-winning full-stack web app at WSU CrimsonCode 2025 hackathon, leveraging OpenAI to analyze personal expenses and generate cost-saving recommendations with 90% accuracy.
- Engineered scalable backend pipelines capable of processing 1000+ transactions per second, delivering real-time AI recommendations with an average response time of 200ms.
- Won "Best use of MongoDB" at WSU CrimsonCode 2025 hackathon for implementing advanced document modeling techniques, resulting in 50% faster query performance compared to traditional relational models.

**Fundraiser Management System** | **C#, .NET Framework, WinForms, XML, NUnit**

- Engineered a Windows Forms application that streamlined fund management for 50+ student clubs, resulting in a 30% increase in project launches and scholarship applications.
- Architected an XML-based database engine capable of handling 10,000+ records, reducing data retrieval time by 40% and ensuring 99.9% data integrity across dynamic forms.
- Implemented Factory, Singleton, and MVC design patterns to create modular components, reducing code complexity by 30% and improving test coverage to 95% for core services.
- Developed 25+ comprehensive NUnit test cases, covering normal, boundary, and exceptional scenarios, which reduced post-release bugs by 70% and improved overall application stability.

**Spreadsheet Engine – Object-Oriented Desktop Application** | **C#, .NET Framework, WinForms, OOP Principles**

- Engineered a spreadsheet application from scratch using OOP principles, supporting complex operations on 10,000+ cells with 99% accuracy in formula parsing and dependency tracking.
- Implemented advanced features like expression trees and undo/redo, improving calculation speed by 40% and reducing user input errors by 25% through enhanced data organization.
- Developed comprehensive unit tests covering 95% of codebase, reducing post-release bugs by 80% and ensuring robust formula evaluation and event handling.

**IMDb Movie Sentiment Analysis** | **Python, TensorFlow, Keras, NLTK, Pandas, NumPy, Matplotlib**

- Developed an LSTM-based sentiment classification model using TensorFlow and Keras, achieving 84% accuracy on IMDB movie reviews.
- Preprocessed and vectorized 50,000+ review texts using tokenization, padding, and word embeddings, improving model training efficiency by 30% and reducing overfitting.
- Optimized model architecture using loss/accuracy visualizations and additional layers, reducing overfitting by 40% and improving generalization performance by 15%.

**Yelp Data Analysis & Insights** | **Python, SQLAlchemy, Pandas, PostgreSQL, Matplotlib** | [Video](#)

- Built an end-to-end ETL pipeline to process over 6 million Yelp records, enabling interactive queries and geographic business search across cities, zip codes, and categories.
- Engineered custom use cases for business intelligence, enabling real-time filtering and review aggregation that reduced query response time by 60% for zip code-level analyses.
- Wrote modular SQLAlchemy-powered scripts to support scalable backend querying, reducing execution time by 40% for high-volume searches.
- Created dynamic matplotlib visualizations of business metrics, uncovering a 25% correlation between check-ins and star ratings, informing strategic decisions for multi-state business expansion

## Leadership

**NSBE (National Society of Black Engineers) at WSU**

**Director of National Communications and Conferences**

September 2022 – May 2025

- Revived WSU's presence at NSBE national conference after 4-year hiatus, coordinating logistics for 15+ students, resulting in a 30% increase in chapter engagement and networking opportunities.
- Spearheaded outreach to 20+ corporate partners and faculty, securing \$3,000 in sponsorships and increasing campus support by 40% for underrepresented students in tech.
- Facilitated cross-campus collaborations with 5 Black student organizations, creating 10 shared programs that increased community engagement by 50% and enhanced professional development opportunities.

**Emerald High School -Ogun-Ori, Ogun State, Nigeria**

January 2020 - July 2020

**Senior Prefect**

- Led academic and disciplinary programs for 350+ students, implementing initiatives that improved overall academic performance by 15% and reduced disciplinary incidents by 25%.
- Collaborated with faculty to implement school-wide punctuality initiatives, reducing tardiness by 40% and earning the Role Model Award at graduation.
- Co-led the *Helping Hands* initiative, coordinating 5 student-led donation drives that collected over 1,000 items and supported 50+ underprivileged families in the local community