Brian Irungu

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Professional Summary

An ambitious and detail-oriented web and software developer with a strong academic foundation in Mathematics and Computer Science. With a deep understanding of algorithm design, data structures, and software engineering principles, I specialize in creating efficient, scalable, and user-friendly web applications. Known for a passion for clean code, performance optimization, and creating seamless user experiences, I'm dedicated to delivering high-quality software solutions. My diverse skills set, combined with a keen interest in innovative technologies, makes me eager to contribute to cutting-edge projects and further develop my expertise.

Education

Bachelor of Science in Mathematics and Computer Science
MNUC , City, Country
Expected Graduation: 2026

- **Relevant Coursework:**
    - **Data Structures and Algorithms** – Solved complex problems using efficient data structures such as trees, graphs, and hash tables.
    - **Software Engineering** – Focused on full-stack software development methodologies, including Agile practices and version control with Git.
    - **Web Development** – Proficiency in both frontend (HTML, CSS, JavaScript) and backend (Node.js, Python) development.
    - **Database Systems** – Gained experience in SQL and NoSQL databases, focusing on designing and optimizing relational and non-relational databases.
    - **Linear Algebra and Discrete Mathematics** – Applied mathematical concepts to optimize algorithms and solve computational problems.
    - **Machine Learning and Artificial Intelligence** – Practical experience in implementing machine learning algorithms, including supervised and unsupervised learning techniques.

Technical Skills

Programming Languages:

- **Proficient:** JavaScript (React, Node.js), Python, Java, C++
- **Familiar:** PHP, R, MATLAB, TypeScript

Web Development:

- **Frontend:** HTML5, CSS3, JavaScript (React.js, Vue.js), Bootstrap, Tailwind CSS, Sass
- **Backend:** Node.js, Express.js, Python (Django, Flask), PHP (Laravel)
- **Tools & Frameworks:** Git, GitHub, Webpack, Babel, Docker, REST APIs, JSON, AJAX
- **Responsive Design:** Experience building responsive websites using Flexbox, CSS Grid, and media queries

Software Development:

- **Principles:** Object-Oriented Programming (OOP), Functional Programming, System Design, Clean Code, Test-Driven Development (TDD), Design Patterns
- **Frameworks & Libraries:** React.js, Express.js, Django, Flask, Angular
- **Version Control:** Git, GitHub, GitLab, Bitbucket
- **Deployment & Hosting:** Heroku, Netlify, AWS, Firebase, Vercel

Database Management:

- **SQL:** MySQL, PostgreSQL, SQLite
- **NoSQL:** MongoDB, Firebase Firestore, CouchDB

Mathematics & Algorithms:

- **Mathematical Optimization:** Linear Programming, Integer Programming, Gradient Descent
- **Cryptography & Security:** RSA encryption, SSL/TLS protocols, hashing algorithms
- **Data Structures:** Arrays, Linked Lists, Stacks, Queues, Trees, Graphs, Heaps, Tries

Other Skills:

- **Cloud Computing:** AWS, Azure, Google Cloud Platform
- **CI/CD:** Jenkins, GitLab CI, CircleCI
- **Testing Frameworks:** Mocha, Jest, PyTest, Selenium

Professional Experience

Junior Web Developer

XYZ Tech Solutions, *City, Country*
Jan 2023 – Aug 2023

- Developed and maintained several modern, scalable web applications using React.js, Node.js, and Express.js.
- Integrated third-party services such as payment gateways, social media login, and email APIs to enhance application functionality.
- Implemented real-time features like live chat and notifications using WebSockets, improving user engagement.
- Collaborated with UX/UI designers to deliver intuitive, visually appealing user interfaces.
- Used agile methodologies to participate in sprint planning, daily stand-ups, and retrospective meetings.
- Worked with cloud hosting platforms (AWS, Firebase) to deploy applications, ensuring high uptime and scalability.
- Optimized front-end performance, reducing page load times by 30% through lazy loading, image optimization, and code splitting.

Software Development Intern

MNUC Innovations, *NAIROBI, Country*
May 2022 – Dec 2022

- Contributed to the development of an enterprise-level financial management system using Java and SQL.
- Designed and implemented RESTful APIs to enable seamless communication between frontend and backend systems.
- Automated various internal processes, reducing data entry errors by 25% and saving valuable development time.
- Collaborated with senior developers to debug and optimize code, improving system performance by 15%.
- Participated in code reviews, ensuring code quality, and adhered to software development best practices.
- Gained hands-on experience with continuous integration/continuous deployment (CI/CD) pipelines and version control workflows.

Projects

Vehicle Selling Website

- Built a fully interactive homepage with advanced animations, dynamic content, and embedded videos using React.js.
- Integrated a search and filter system, enabling users to browse vehicles by various criteria such as price, make, and year.
- Utilized Firebase to manage user authentication, allowing users to register, log in, and manage their profiles securely.
- Enhanced UX with real-time vehicle availability updates using WebSockets and Firebase Realtime Database.

School Management Platform

- Developed an all-in-one school management system with separate dashboards for administrators, teachers, and students.
- Employed Django for the backend, ensuring a secure and efficient data structure for storing and accessing academic records, schedules, and grades.
- Designed an intuitive and visually appealing frontend using Bootstrap and custom CSS, increasing user adoption by 40%.
- Integrated Google Calendar API to provide real-time scheduling and event tracking.

Personal Blog Website

- Created a luxurious and responsive personal blog with interactive hover effects, animations, and a custom post layout.
- Implemented dynamic content loading with React.js and styled the website using Tailwind CSS for a clean, modern design.
- Included a contact form with server-side email integration and implemented basic SEO to increase visibility on search engines.

AI-Based Image Recognition System

- Designed an AI-powered image recognition system using Python and TensorFlow, capable of classifying images with high accuracy.
- Integrated the system with a Flask-based web interface, allowing users to upload images for classification.
- Optimized the model for faster predictions, reducing inference time by 20%.

Certifications

- **Cisco Networking Essentials** – 2024
- **Google Data Analytics Certificate** – 2022
- **Certified Java Developer (Oracle)** – 2024
- **AWS Certified Solutions Architect – Associate** – 2023

Awards & Achievements

- **Best Innovation Award** – MAMA NGINA UNIVERSITY, 2024 – Led a team project that developed an innovative AI-powered recommendation system.
- **Dean's List** – MAMA NGINA UNIVERSITY 2024 – Awarded for maintaining a GPA in the top 10% of the class.
- **Top Coder** – MAMA NGINA UNIVERSITY, 2024 – Ranked in the top 5% of participants in a university-wide coding competition.
- **Certified Microsoft Azure Developer** – Achieved certification after completing a rigorous exam focused on cloud computing and app development.

Extracurricular Activities

- **Member, University Coding Club:** Organized workshops and coding competitions, sharing knowledge and mentoring fellow students.
- **Volunteer, Local Tech Workshops:** Taught web development basics to high school students, helping them build their first web applications.
- **Speaker, Tech Talks:** Delivered presentations on modern web development frameworks, including React.js and Node.js, to university students.