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# Eric Joshua Nyato

Frontend-Blockchain Developer

## Personal information

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Name	Eric Joshua Nyato
Date of Birth	04th July 1997
Nationality	Tanzania
Portfolio	<a href="https://ericjoshua-myportfolio.netlify.app/">ericjoshua-myportfolio.netlify.app/</a>

## Education

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<b>Chung-Ang University</b> Seoul, South Korea Sep 2022 - Jul 2024	Master of Civil engineering, Construction Project management Grade: 4.3/4.5GPA
<b>Wuhan University of Technology</b> Wuhan, China Sep 2016 - Jul 2020	Bachelor of Civil engineering Grade: 3.35/4 GPA

## Skills

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### Programming Languages

JavaScript, TypeScript, HTML5/CSS3, Solidity

### Frontend development

React, Tailwind, ChakraUI

### Blockchain development

Web3.js, Ethereum, Polygon, ZoKrates(ZKP toolbox), Remix IDE, Hardhat

### Others

Git, Linux, Vite, VS Code

## Language skills

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Swahili	Native speaker
English	Fluent / TOEIC 885
Korean	TOPIK 4
Chinese	HSK Level 4 (Chinese Proficiency Exam- 2019)

## Experience

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**Construction innovation technology Lab (ContiLab)**  
Chung-Ang University, Seoul  
Sep 2022 - Present  
<http://en.contilab.co.kr/our-team/>

**Researcher :** Focuses on advancing construction project management through emerging technologies such as AI, Blockchain, VR/AR, BIM, IoT etc.

- My research focuses on integrating blockchain technology into construction safety, training and management processes.

**Yooshin Engineering Co.**  
Dar es salaam, Tanzania  
Jan 2021 - July 2021

**Graduate Engineer Trainee:** New Selander Bridge project in Tanzania, managed by GS Engineering & Construction and Yooshin Engineering Corp. as the consultant

- Site Supervision · Quality & Safety control · Construction Planning

## Projects

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### zk-NMRs

Zero-knowledge near-miss reporting system (zk-NMRs)  
<https://inmrs.netlify.app/login>

I developed a decentralized web application (DApp) using blockchain and zero-knowledge proof technology to ensure construction site workers' anonymity when reporting near-misses and accidents during projects.

- Implemented smart contracts using Solidity to define backend logic and conducted extensive testing and simulation of the smart contracts in the Remix IDE to validate functionality and performance.
- Integrated zero-knowledge proof technology using the ZoKrates toolbox to allow anonymous identity verification.
- Connected the backend to the frontend using Web3.js, to facilitate blockchain interactions, and used React.js for building a responsive user interface.
- Incorporated the (IPFS) to achieve decentralized storage with no reliance of centralized servers.

### Game-Corner

Game ratings responsive Web application  
[game-corner-five.vercel.app](https://game-corner-five.vercel.app)

I developed a responsive website for a comprehensive game rating platform, emphasizing smooth sorting and filtering capabilities across all device sizes. This project combined modern design principles with latest development technologies to ensure a seamless user experience.

- Using Typescript and React, i built an efficient and responsive website.
- I implemented Chakra UI library for building React components that are responsive with easy theming and style adjustments.

## Portfolio

### My Portfolio

[ericjoshua-myportfolio.netlify.app](https://ericjoshua-myportfolio.netlify.app)

I designed and developed my portfolio website, prioritizing a user-friendly UI/UX design by utilizing modern design principles and technologies to create a visually appealing layout that adjusts seamlessly across various devices with interactive elements and animations to showcase my technical skills .

- Using Javascript and React, to build an efficient and responsive website.
- I implemented Tailwind as a CSS framework for easy theming and style adjustments.

## Academic achievement

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### Global Korean Scholarship (GKS)

2021 recipient

Awarded a prestigious full academic scholarship for international students funded and managed by the NIIED a branch of the Ministry of Education in South Korea.

### Journal Paper

First author (under-review)

**Title** - Integrated zero-knowledge proof and blockchain system for privacy-preserving near-miss reporting in construction projects

- Automation in Construction (Journal)

### Conference Paper

First author (To be published)

**Title** - A Conceptual Blockchain and Token-Incentive Approach for Near Miss Reporting in Construction

- International Conference on Construction Engineering and Project Management - ICCEPM, 2024

### Conference Paper

Co-author (To be published)

**Title** - Understanding the Role of Inter-Individual Variability in Fatigue Monitoring of Construction Workers

- International Conference on Construction Engineering and Project Management - ICCEPM, 2024

### Excellent Graduate

2nd Prize

Awarded Excellent Graduate Certificate for finishing second in class during Bachelor's degree in Civil Engineering