

Vihangi Sandakirani

Electronic and Computer Science Undergraduate

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ABOUT ME

A passionate and driven fourth-year Electronic and Computer Science undergraduate with hands-on experience in full-stack development, specializing in frontend development using React. Skilled in building responsive and user-friendly web and mobile applications, along with creative expertise in 3D modeling and design. Proficient in Java, JavaScript, and modern web technologies, with growing knowledge in AI/ML systems and cybersecurity fundamentals. My academic journey includes a final-year research project focused on a real-time pitch detection assistant system for singing accuracy. Actively involved in leadership and design roles within ECSC university clubs, where I've organized and participated in numerous tech events, webinars, and competitions. Currently focused on building impactful digital experiences by blending creativity, intelligence, and security awareness.

EDUCATION

University of Kelaniya
BSc (Hons) in Electronics and Computer Science

Kelaniya, Gampaha
(Reading)

- GPA: 3.52 (Current)

Gothami Balika Vidyalaya

Colombo 10, Colombo
2011 - 2020

- **G.C.E. Advanced Level Examination (Physical Science Stream)** [2020]
Grades: A in Mathematics, B in Chemistry, C in Physics
Z-Score: 1.5459
 - **G.C.E. Ordinary Level Examination** [2017]
Grades: 7A, 2B
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Community & Leadership

Electronics and Computer Science Club/University of Kelaniya

Kelaniya, Gampaha
August 2023 - August 2024

- Collaborated with ECSC in UOK Robot Battles 2k24
 - Organized Friendly cricket match.
 - Organized a Seminar Series
 - Organized Fundraising Campaigns
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CERTIFICATIONS

- CC.E.O 2.0 Case Study Competition – Participation Certificate *AIESEC in University of Kelaniya - July 2023*
 - Smart Panel Light Transformer – Innovation Showcase *ICAPS 2024 – July 2024*
 - Introduction to C# *Issued by Sololearn - July 2024*
 - Introduction to C *Issued by Sololearn - July 2024*
 - Introduction to HTML *Issued by Sololearn - July 2024*
 - Introduction to CSS *Issued by Sololearn - July 2024*
 - Introduction to Cyber Security *Issued by Simplileran - August 2025*
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RESEARCH EXPERIENCE

Real-Time On-Pitch Singing Detection Assistant for Sinhala Songs

- Built a real-time singing evaluation system using Python (Tkinter GUI) that visualizes live song notes on a graph and compares them with original reference notes.
 - Implemented pYIN-based pitch extraction, silence trimming, and alignment of pitch/tempo for accurate comparison.
 - Designed features to calculate overall singing accuracy and highlight misaligned/variant notes to support competition judging panels.
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PROJECTS

Personal Developer Portfolio | *React, TypeScript, Tailwind CSS, CSS, Three.js*

 Portfolio

- Designed and developed a dynamic personal portfolio website to showcase projects, technical skills, and certifications using modern web technologies.
- Integrated Three.js for interactive 3D models and animations to enhance visual engagement.
- Used Tailwind CSS for utility-first styling and implemented responsive design for a seamless experience across all devices.
- Focused on delivering a smooth, animated, and professional user interface using best practices in front-end development.

Smart Panel Light Transformer | *IoT Project*

Team Member - 4th Semester

- Designed and implemented an IoT-based smart panel light transformer system to enable remote control and automation of lighting.

Mobile Shop Management System | *C, Visual Studio, MySQL* *Team Member - 5th Semester*

 GitHub

- Developed a comprehensive mobile shop management system with secure login, inventory management, and customer record handling, enabling efficient phone stock tracking and operations.

Mobile App for Coffee Shop (Cafe Bloom) | Kotlin, Android Studio, SQLite
Team Member - 6th Semester



- Developed a fully functional mobile app for an online coffee shop, allowing customers to browse, customize, and order coffee seamlessly.

Online Mobile Phone Selling System | React, TypeScript, MongoDB, Spring Boot (Cellular World)
Team Member - 6th Semester



- Developed a comprehensive online mobile phone selling website incorporating both customer and admin sections to facilitate user-friendly browsing, purchasing, and efficient inventory management.

Mobile App | Pitch Meter UI (React Native + Expo)



- Developed a React Native mobile app using Expo for pitch-based audio analysis with live recording functionality.
- Designed a clean and responsive user interface allowing users to select mode, singer, song, and desired pitch easily.
- Ensured smooth user interaction with an intuitive single-tap recording feature.

Technical Skills

Languages: Java, HTML, CSS, JavaScript, PHP, Python, C#, C, Kotlin

Databases: MongoDB, SQLite

Frameworks & Libraries: Spring Boot, React.js, React Native, Expo, TensorFlow, Matplotlib, Tailwind CSS

Developer Tools: Android Studio, Visual Studio, Visual Studio Code, Postman, GitHub

Additional Tools: Figma, Canva, Blender, Photoshop

Applications: Web Development, Mobile Development, UI/UX Design, MATLAB

REFERENCE

Professor A L A K Ranaweera

Senior Lecturer, Programme Coordinator (ECS)

Department of Physics and Electronics

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Dr. B.M.T. Kumarika

Senior Lecturer (Grade II)

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