



# NHEK CHANPANHA

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## SUMMARY

I am a software engineering student with 3 years of academic and practical experience, with experience in programming languages such as Python, Java, C/C++, Node.js, Express.js, and React.js. I've worked on software development projects involving system design, implementation, and debugging in real-world scenarios. I bring strong problem-solving skills and a continuous drive to learn and grow in the tech field.

## EDUCATION

CAMTECH UNIVERSITY	2022-Current
SOFTWARE ENGINEERING	
10 JANUARY HIGH SCHOOL	2019-2022
BACCALAUREATE II	
Australian Center For Education (ACE)	2019-2020
INTERMEDIATE STUDENT BOOK	

## PROJECT

### Rice Quality Classification (Roboflow, YOLOv5, Python, OpenCV)

- Developed a machine learning model to classify rice grains as "Good Rice" or "Broken Rice" using object detection.
- Annotated and labeled the dataset using Roboflow with bounding boxes for individual rice grains.
- Trained a YOLOv5 model with image augmentations (rotation, brightness, flipping) to enhance robustness.
- Used OpenCV for image preprocessing and result visualization.
- Prepared the model for integration into real-time rice quality inspection systems.

### Movie Booking Ticket (React.js, Tailwind CSS, Node.js, Express.js, MySQL)

- Developed and maintained the backend using Node.js and Express.js following the MVC architecture.
- Used Sequelize ORM to perform CRUD operations and manage the MySQL database efficiently.
- Tested and validated RESTful API endpoints using Postman to ensure stability and performance.
- Collaborated with the frontend team and developed a responsive UI using React.js and Tailwind CSS.
- Deployed the application on a server for live testing and production use.

### Academic Record Management System (Java, phpMyAdmin, MAMP)

- Designed and implemented a database system to manage student records, courses, grades, and enrollments.
- Used MySQL as the relational database and phpMyAdmin on a MAMP server for database management and testing.
- Developed the backend logic using Java with Object-Oriented Programming (OOP) principles to enable robust interaction with the database.
- Connected the Java application to the MySQL database using JDBC (Java Database Connectivity) for executing SQL queries and managing data transactions.

### V-do Auto Cut (Python, OpenCV, MoviePy, Speech-to-Text APIs)

- Developed a tool to automatically detect and cut silent moments from videos, enhancing content quality and reducing runtime.
- Implemented automatic subtitle generation by converting speech to text using speech-to-text APIs for improved accessibility.
- Utilized OpenCV and MoviePy libraries for efficient video manipulation and processing tasks.

## **Shoe Inventory Management System (SRS, UML Diagrams, System Design)**

- Designed a comprehensive Software Requirements Specification (SRS) document detailing core modules, user roles, and key system functionalities.
- Created detailed Use Case, Class, and Sequence Diagrams to visualize system workflows and interactions.
- Developed a clear roadmap for development, ensuring alignment among stakeholders before implementation.
- Focused on defining system scope, requirements, and user interactions to facilitate smooth project execution.

## **Camtech Blog (Flask, Python, HTML, CSS)**

- Developed a community website for Camtech students and teachers across generations to interact and share information.
- Built the backend using **Flask** (Python) to handle routing, user sessions, and data management.
- Designed clean and responsive front-end pages with HTML and CSS to provide a user-friendly experience.
- Enabled features such as posting, commenting, and user profiles to foster better communication and understanding.
- Focused on creating an inclusive platform to enhance collaboration within the Camtech community.

## **VOLUNTEER**

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### **Innovative Tech Challenges (Logistics Team)**

- Assisted in coordinating logistics and resource management to support smooth event operations.
- Collaborated effectively with multiple teams to address needs and resolve issues during the event.
- Ensured timely setup, communication, and troubleshooting to facilitate a successful challenge.

### **National Career and Productivity Fair (Organized by National Employment Agency)**

- Assisted with attendee registration, ensuring smooth and efficient check-in processes.
- Managed data entry and verified participant information accurately.
- Collaborated with team members to maintain organized registration flow throughout the event.

### **Dygitalk - Technology Literacy Improvement (Core Member)**

- Led the planning and organization of events focused on cybersecurity awareness and education.
- Delivered knowledge-sharing sessions on protecting oneself from hackers and online threats.
- Coordinated with team members to ensure smooth execution of activities and maximize participant engagement.
- Promoted cybersecurity best practices to enhance community knowledge and safety.

## **CORE SKILLS**

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- Problem-solving
- Time management
- Design Thinking
- Teamwork

## **TOOLS**

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- Postman
- Git
- Figma

## **REFERENCES**

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- Mr. Pen Lymeng
- Lecturer, Cambodia University of Science and Technology (CamTech)
- Email: lymeng.pen@camtech.edu.kh

## **PROGRAMMING LANGUAGE**

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- Python, C/C++
- Java
- JavaScript
- MySQL(SQL Query)

## **FRAMEWORKS & LIBRARIES**

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- React js
- Node Js, Express Js
- Sequelize ORM