

# CLEMENT HANSEL

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## About Me

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I'm a **Full-Stack Developer** and aspiring **Senior Software Engineer** with a strong focus on **IoT systems and smart technologies**. I design and deploy scalable, real-world solutions such as **piezoelectric and LiDAR-based sensors, structural health monitoring systems, and smart coastal buoys**. Currently improving safety, data visibility, and operational efficiency in both industrial and smart city contexts. At **PT. Karya Gemilang Utama**, I lead **cross-functional teams** and manage **end-to-end IoT deployments**, ensuring seamless integration from hardware to cloud. My core tech stack includes **TypeScript, Next.js, React, Express.js, Tailwind CSS, PostgreSQL, and MongoDB**, with hands-on implementation of **IoT protocols** like **LoRa** and **MQTT**. I specialize in **bridging technical execution with project leadership**, translating complex requirements into impactful solutions. Looking ahead, I aim to grow into a **Senior Engineering role**, deepening my expertise in **distributed IoT architecture, edge computing, and AI-driven solutions**. Continuously learning to drive innovation in the evolving world of connected technology.

## Working Experiences

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### Software Engineering

#### Project Manager – IoT & Smart Systems

April, 2024 – Present

PT. Batukarang Kenan Abadi - Pekanbaru, Indonesia

- Led development and delivery of IoT solutions for smart city and industrial use cases.
- Managed hardware-software integration across teams and vendors.
- Delivered 3 MVP systems with GPS, GSM, and real-time dashboards.
- Ensured that project delivered on time and following the budget.

#### Project Manager – IoT & Smart Systems

April, 2023 – March, 2024

PT. Karya Gemilang Utama - Bekasi, Indonesia

- Designed and Implemented WIM systems to 3 Indonesian major cities in 3 provinces, for Ministry of Transportation (DisHub) and Ministry of General Work (PUPR).
- Unified UPPKB data into a centralized interface for real-time monitoring.
- Led end-to-end development, and on site implementation, coordinated national rollout with lean teams and multiple stakeholders.
- Achieved government compliance and 70% budget efficiency.

#### Technology Specialist (Probation)

February, 2023 – April, 2023

PT. Karya Gemilang Utama - Bekasi, Indonesia

- Built intranet with Next.js, React, and PostgreSQL.
- Increase inter-department communication and reduce human error in production.
- Proposed current technical difficulties and plan for software development to solve the issues.
- Supported calibration and field testing of Weighbridge and WIM systems.

## Other Experiences

### Sous Chef

November, 2022 – January, 2023

Shikaku - The Dharmawangsa Hotel - Jakarta, Indonesia

- Managed daily kitchen operations in a luxury hotel, ensuring all operation running well and follow management standards.
- Oversaw procurement, stock position, portioning, and cost control, resulting in food cost ratio under 30% at all time.
- Removing overtime with proper scheduling and training, with about 10% reduction on monthly man power cost.

- Crafted menus for events that emphasize on current stocks, resulting wastage reduction and increase in profit.

## **Sous Chef**

**September, 2021 – October, 2022**

### **Habitate – Aston Hotel - Jakarta, Indonesia**

- Supervised kitchen teams and managed event menu planning.
- Handled report and direct communication with management.
- Streamlined daily operations and event execution, increasing kitchen efficiency by about 20%, based on management review.
- Ensured food cost below 30%.

## **Cook**

**February, 2020 – October, 2021**

### **Delicatesse Bistro - Tangerang, Indonesia**

- Maintained quality service in high-pressure environments.
- Created menus and packaging to follow Covid Protocols.
- Ensured Products were made with high hygiene standards.
- Trained new employee to handle daily tasks.

## **Assistant Sales Manager**

**December, 2016 – January, 2019**

### **Creatrix Interior - Jakarta, Indonesia**

- Oversaw B2B/B2C campaigns and client relationships.
- Grab Projects with minimum total value of Rp. 200.000.000 monthly.
- Ensured delivery of products according to customer requests.
- Documented projects to internal and customers.

## **Sales & Marketing Executive (Contract)**

**September, 2015 – June, 2016**

### **PT. Multiviscomindo - Jakarta, Indonesia**

- Led product demos and digital marketing strategies for government procurement.
- Increased new customer each month.
- Ensured that customer debt ratio under 10% of their total cumulative purchase.
- Created new selling strategies to keep the stock moving.

## **Assistant Restaurant Manager**

**July, 2014 – January, 2015**

### **Planet Holiday Hotel - Batam, Indonesia**

- Acted as interim manager; handled cost control, HR, and customer service.
- Liasson of Front of House and Kitchen to ensure smooth service and customer satisfaction.
- Ensured daily operational is running well with proper staff management.
- Trained employee to follow the management standards.

## **Cook (Seasonal)**

**November, 2012 – May, 2014**

### **Kuala Lumpur Convention Centre - Kuala Lumpur, Malaysia**

- Delivered food preparation for high-volume events.
- In charge of vegetables preparation in high volume.
- Report any products that are in low quantity to CDP.
- Make sure to finish the daily preparation according to standard and proper hygiene.

## **Junior Sous Chef**

**November, 2010 – December, 2011**

### **Chow Woodward St - Wellington, NZ**

- In charged with shifts operation, made sure that the operation runs smoothly.
- Managed staff schedule and total working hours adhere to the management limit.
- Emphasized on seasonal ingredients in the menu to reduce cost and increase variety for regular customer.
- Handled special cases like allergies, and rugby team requests, directly to ensure proper care is given.

## **Cook**

**October, 2009 – November, 2010**

### **Palm Malaysian Bistro - Lower Hutt, NZ**

- Handled vegetables and Roti preparation.
- Handled curries and desert during service time.
- Assisted kitchen hand in closing up or opening depends on the shifts.
- Ensured that all the preparation is following restaurants standard and hygiene protocols is adhered.

## Project Experience

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### Disaster Mitigation & Monitoring Platform (Demo)

March, 2025 – May, 2025

#### BPBD – West Java

- Led development of an anomaly detection system with GIS mapping and real-time sensor alerts for BPBD West Java.
- Collaborated directly with government stakeholders to align technical solutions with operational disaster response goals.
- Designed and built the system using Next.js, React.js, PostgreSQL (PostGIS), and Leaflet.js.
- Integrated IoT sensors for real-time data processing and early warning notifications.
- Delivered a prototype currently under final review for official integration into BPBD's workflow.

[Disaster Mitigation Dashboard](#)

### Structure Health Monitoring System (Demo)

December, 2024 – March, 2025

#### PT. Graha Survey Indonesia

- Designed and deployed a real-time structural monitoring dashboard with alert mechanisms.
- Led the project from planning to deployment, engaging stakeholders to ensure alignment with operational goals.
- Developed interactive data visualizations for easier interpretation by maintenance teams.
- Enabled early risk detection, improving the overall safety and responsiveness of infrastructure management.

[Structure Health Monitoring System Dashboard](#)

### Weigh-in-Motion Sensor with Lidar (Deployed)

April, 2023 – March, 2024

#### PUPR - DisHub

- Developed and deployed a nationwide truck monitoring system integrating weight sensors, Lidar, and national transportation databases.
- Led on-site implementation and directly trained DisHub personnel for system operations.
- Coordinated with regulatory bodies to ensure compliance and support future scalability.
- System supports real-time vehicle monitoring and policy enforcement as part of the UPPKB initiative.
- Note: Post-deployment details are covered under a Non-Disclosure Agreement (NDA).

## Education

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### RevoU

October, 2024 – June 2025

#### Software Engineering Bootcamp

Covered full-stack development (React, Next.js, TypeScript, Node.js, PostgreSQL) with agile team simulations.

[Link Certification](#)

### Taylor's University, Malaysia

February, 2012 – August, 2014

#### Bachelor of Culinary Arts & Food Service Management (Hons)

Thesis: The origin of human cultures in relation to culinary arts

[Link Certification](#)

## Organization Experience

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### Sudent Cultural Exchange Program

June, 2014 - November, 2014

#### Taylor University – Toulouse II University - Toulouse, France

- Selected as group Leader and point of contact for 5 members.
- Responsible for the group safety, and adherence to exchange program rules.
- Ensured that all members attending daily programs, and presenting our culture at the end of the program.
- Ensured that all members create positive relationship and giving positive brand image to locals.

[Link Certification](#)

## STEP Program

January, 2013 – April, 2014

Taylor University – KLCC – Kuala Lumpur, Malaysia

- Selected for STEP Malaysia Leadership Program.
- Selected as group leader and point of contact for students, Taylor University, and Kuala Lumpur Convention Center.

[Link Certification](#)

## HOPE Malaysia

May, 2012

Taylor University – KLCC – Kuala Lumpur, Malaysia

- Raised RM150,000+ for HOPE KL charity in one week.

[Link Certification](#)

## Graduate Research Colloquium

June, 2012

Taylor University – KLCC – Kuala Lumpur, Malaysia

- Presented at Graduate Research Colloquium 2012.

[Link Certification](#)

## Additional Information

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### Technical Skills

- **Languages:** TypeScript, Python, HTML5, CSS3, PHP, SQL, Go
- **Frameworks/Libraries:** React, Next.js, Node.js, Express.js, Tailwind CSS
- **Databases:** PostgreSQL, MongoDB, Firebase
- **DevOps & Infrastructure:** Docker, Kubernetes, CI/CD, Nginx, Cloud Deployment
- **Tools:** VS Code, Git, GitHub, Postman
- **Concepts:** IoT Integration, LoRa, MQTT, REST API, MVC, Responsive Design,
- **Development Methodologies:** Agile, Scrum

### Soft Skills

- Fluent in English and Bahasa Indonesia
- Strong ownership and communication in cross-functional technical teams
- Proven leadership in team building and project execution
- Analytical mindset with expertise in full-cycle system architecture
- Adaptive, proactive, and passionate about driving tech innovation
- Consistently deliver within scope, budget, and timeline

## Certification

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### Software Engineering Certificate

May, 2025

RevoU - Online, Indonesia

[Link Certification](#)

### License Professionnelle Certificate

November, 2014

Toulouse II University - Toulouse, France

[Link Certification](#)

### Delf A1 Certificate

August, 2013

Taylor University - Kuala Lumpur, Malaysia

[Link Certification](#)

### Woman Deliver Conference 2013

August, 2013

Taylor University - Kuala Lumpur, Malaysia

[Link Certification](#)

### Food Safety Certificate

April, 2010

Weltec - Petone, New Zealand

[Link Certification](#)