Oktavian Andi Cahya Nugraha

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SUMMARY

Passionate Front-End Developer with a strong interest in web development and modern technologies. Experienced in building responsive and interactive web applications, with a focus on usability, performance, and clean code. Continuously expanding technical expertise in front-end frameworks, web technologies, and software development practices. Committed to delivering effective digital solutions and contributing to collaborative development teams.

PROFESSIONAL EXPERIENCES

Frontend Engineer 11/2024 – 10/2026
PT PLN (Persero) Pusat Manajemen Proyek (PUSMANPRO) Semarang, ID

- Project: SIMPP (Sistem Informasi Monitoring Penugasan dan Pelaporan)
- Collaborated with backend team to integrate API endpoints
- Integrated UI designs in NextJS to create a visually appealing interface.
- Managed global state with Zustand to ensure smooth application performance
- Skills: Next.JS, React.JS, Typescript, Tailwind CSS, Shadcn UI

EDUCATION

Master of Informatics Engineering, Major in Computer Science 03/2025 – Present
Dian Nuswantoro University Semarang, ID
GPA: 3.88/4.0

Bachelor of Informatics Engineering, Major in Computer Science 09/2020 – 02/2024
Dian Nuswantoro University Semarang, ID
GPA: 3.61/4.0 (7th semester)

AWARD & CERTIFICATION

Web Developer Scheme 2024
BNSP

Meta Frontend Developer 2024
Meta

Front End Development 2023
Skilvul

React JS Web Programming 2023
Camp404

Flutter Mobile Programming 2023
Camp404

Android with Java Native 2022
Hacktiv8

OTHER

Languages
Intermediate English, Fluent Bahasa Indonesia (native)

Technical Skills
JavaScript, TypeScript, Python, NextJS, ReactJS, Java Native, React Native, PHP (Laravel - CodeIgniter), Figma, Git Version Control

Familiars
Software, Fullstack Website, Front-End, Artificial Intelligence

PERSONAL PROJECTS

AI Review CV — AI CV Reviewer & ATS Checker
An AI-powered web platform that helps job seekers improve their resumes through ATS scoring, keyword analysis, and job description matching, with actionable recommendations tailored to their CVs.
- Built with React, TypeScript, and Vite.
- Integrated backend APIs to analyze resumes uploaded as PDFs or images.
- Developed an interactive dashboard displaying scores, prioritized improvements, and suggested rewrites.
- Implemented responsive CSS layouts for desktop and mobile devices.

Art of Saving - AI OCR Website
Art of Saving is a personal finance platform that helps users track income, expenses, and cash flow through an intuitive dashboard. It combines interactive financial charts with receipt scanning to simplify transaction entry and help users understand their spending habits.
- Built with Next.js, React, and TypeScript.
- Responsive interface styled with Tailwind CSS and shadcn/ui.
- Database and user authentication powered by Supabase.
- Integrated receipt OCR to automatically fill transaction details.
- Interactive charts and transaction search, filtering, and sorting.
- Supports English and Indonesian, with light and dark themes.

POS Kasir — Desktop Point of Sale Application
POS Kasir helps small retailers simplify checkout, manage inventory, and track sales in one application. It works entirely offline, keeping daily operations running without an internet connection.
- Built with Electron, React, and TypeScript.
- Interface styled with Tailwind CSS.
- Local data storage using SQLite and Prisma.
- Cash transactions with automatic change calculation and stock updates.
- Receipt printing, PDF saving, and transaction history.
- Sales reports, gross profit estimates, and CSV export.

Personal Portfolio Website
On going
An interactive portfolio showcasing frontend engineering, AI projects, and research through detailed case studies and visual demonstrations. Designed to help recruiters and collaborators explore technical skills, development approaches, and project outcomes.
- Built with Next.js, React, and TypeScript.
- Responsive interface styled with Tailwind CSS.
- Interactive animations powered by Framer Motion.
- Supports English and Indonesian.
- Features project filtering, image galleries, and video demonstrations.
- Includes SEO metadata and structured data for search visibility.

Explore Kudus Website
"Explore Kudus" is a platform for tourists and local communities to explore and discover the tourism potential in Kudus Regency, collaborating with the Kudus Regency Culture and Tourism Office.
- Interface design was created using Figma
- Front-End was created with ReactJS
- Back-End was created in PHP using the CodeIgniter 4 framework
- User interface style is set using Tailwind CSS
- Program was created using Visual Studio Code
- Deployed on Virtual Private Server (VPS) from Niagahoster

Majestic Clinic Center Website
This program is created to facilitate the operation of the health clinic.
- Interface design was created using Figma
- Front-End and Back-End was created with PHP Native
- User interface style is set using Bootstrap
- Program was created using Visual Studio Code

Fine-Grained Pavement Crack Segmentation Using Dual-Attention Residual U-Net with ASPP and Boundary Supervision
This research focuses on developing an advanced deep learning architecture, DAResUNet-ASPP, for fine pavement crack segmentation. The proposed model integrates Residual Blocks, Dual-Attention, Attention Gates, Atrous Spatial Pyramid Pooling (ASPP), Strip Pooling, Deep Supervision, and Edge Supervision to enhance feature extraction, capture multi-scale crack patterns, and improve segmentation accuracy on complex pavement surfaces.

- **Frameworks:** PyTorch, Python, OpenCV, NumPy, Matplotlib
- **Datasets:** Crack500, CrackForest, DeepCrack, and Non-Crack Images (3,548 images)
- **Development Environment:** Google Colab, Kaggle (NVIDIA Tesla T4 GPU for profiling)
- **Model Architecture:** Dual-Attention Residual U-Net with Compact ASPP, Strip Pooling, Attention Gates, and Boundary Supervision
- **Evaluation Metrics:** Dice Score, IoU, Accuracy, Precision, Recall, F1-Score, Pixel-wise Average Precision
- **Experimental Methods:** Leave-One-Component-Out (LOCO) Ablation Study, Multi-Seed Validation, Threshold Sensitivity Analysis

Enhancing Indonesian Sentiment Analysis with a Hybrid IndoBERTweet-BiLSTM Architecture
This project introduces a hybrid deep learning model that combines IndoBERTweet and Bidirectional LSTM (BiLSTM) for improving sentiment classification in the Indonesian language. The model leverages IndoBERTweet's contextual embeddings—optimized for informal social media language—and BiLSTM's ability to capture sequential dependencies, resulting in superior sentiment understanding.

- **Frameworks**: PyTorch, Hugging Face Transformers
- **Datasets**: Combined Indonesian sentiment datasets (Tweets, Reviews, and Public Opinions)
- **Development Environment**: Visual Studio Code & Google Colab
- **Hardware**: NVIDIA GeForce RTX 3050 GPU
- **Evaluation Metrics**: Accuracy, Precision, Recall, F1-Score, Confusion Matrix

Image Denoising Using Convolutional Autoencoder (CAE) and U-Net
This project focuses on developing and comparing deep learning architectures for image denoising tasks, specifically removing salt-and-pepper noise from leaf images. The study aims to support agricultural computer vision systems for automatic plant disease diagnosis.

- **Framework**: PyTorch (Python)
- **Dataset**: PlantVillage (tomato leaf images)
- **Environment**: Google Colab & Visual Studio Code
- **Evaluation Metrics**: PSNR, SSIM
- **Comparison Methods**: Median Filter, CAE, CAE-SC, U-Net
- This project demonstrates strong skills in deep learning model design, computer vision, and image restoration, emphasizing architectural optimization through skip connections and encoder-decoder structures