

JISHNU P G

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EDUCATION

Yuvakshetra Institute of Management Studies (YIMS), Palakkad, Kerala
2026

Expected March

Candidate for Bachelor of Computer Applications (BCA), Calicut University

GHSS Vellinezhi, Palakkad, Kerala

March 2023

High School Diploma, Computer Science (Plus Two)

PROJECTS

SmartWatt AI - Energy Estimation & Disaggregation Tool

2025-2026

Project Head & Lead Developer

- *Problem/Context:* Solved the "Linear Load Paradox" in residential energy estimation where pure AI models failed on linear loads (<31% accuracy) and traditional calculators missed aging appliance degradation.
- Engineered a Physics-Informed Hybrid AI system for appliance-wise energy estimation, achieving 94.5% accuracy on Refrigerators and 86.0% on LED Lights (+52-66% vs. Pure AI baseline).
- Developed a Dual-Inference Engine, dynamically switching between Neural Networks for non-linear loads and Physics-Enforced Logic Gates for linear loads, ensuring 98% prediction precision.
- Designed and integrated a KSEB Tariff Engine compliant with 2024-25 billing standards to predict user tariff bracket jumps.
- Built a full-stack solution using Next.js 14 (TypeScript/React) and a FastAPI backend with TensorFlow/Keras model serving, integrated with Supabase (PostgreSQL).
- *Technologies:* Python, FastAPI, TensorFlow/Keras, Scikit-learn, Pandas, Next.js 14, TypeScript, React, PostgreSQL, Supabase, Physics-Informed ML.

LEADERSHIP

Gender Club, YIMS Palakkad, Member

- Contributing to awareness and inclusivity initiatives

SKILLS

Programming Languages: Python, JavaScript, TypeScript, SQL, C, Java, PHP

Web Technologies: HTML, CSS, React, Next.js, Tailwind CSS, Plotly.js

Backend & ML: FastAPI, TensorFlow, Keras, Scikit-learn, Pandas, NumPy

Databases: PostgreSQL, Supabase

Tools: Git, jsPDF, NILM

Mobile & Systems: Android Development, Operating Systems

INTERESTS

Machine Learning, Web Development, Data Science, Energy Analytics, Mobile Development

