

# 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***

*High School Diploma, Computer Science (Plus Two)*

*March 2023*

## 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

