BICHU DEVNARAYAN
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EDUCATION

Indian Institute Of Information Technology   Kottayam, Kerala
Bachelor of Technology: Computer Science and Engineering   Expected May 2027
Cumulative GPA: 8.85/10

Relevant Coursework: Data Structures & Algorithms (DSA), Database Management Systems (DBMS), Operating Systems, Computer Networks, Compiler Design

WORK EXPERIENCE

Pupilfirst   June 2025 – Present
Junior Fullstack Developer Intern
- Engineered scalable features for the UN-recognized Palliative Care Grid, improving real-time coordination for home-based care.
- Worked across a distributed codebase using issue-driven workflows, code reviews, and documentation-first practices.
- Developed modular REST APIs and responsive UI components using React, Node.js, and PostgreSQL.
- Collaborated in a distributed team using Agile workflows, enhancing system reliability, monitoring, and deployment via Docker.

IIIT - Nagpur   June 2025 – Aug 2025
Research Intern — *Under Dr. Neha Kasture*
- Achieved 0.597 mAP by optimizing object detection models on the COCO dataset using PyTorch and TensorFlow.
- Designed end-to-end ML pipelines for image captioning and sentiment-grounded multimodal inference.
- Applied advanced augmentation, preprocessing, and hyperparameter tuning techniques for reproducibility and performance.

PROJECTS

ASTROBOT – RAG-based AI Chatbot   **GitHub**
- Developed a semantic-aware RAG chatbot using LangChain, FastAPI, and sentence-transformers, enabling multi-turn, context-rich interactions.
- Integrated semantic chunking, vector indexing, memory modules, and follow-up Q&A for accurate retrieval and personalized responses.
- Dockerized and modularized backend for deployment in low-resource environments with a themed conversational UX.

SMS-SPAM-DETECTOR   **Live Demo**   **GitHub**
- Built an end-to-end ML pipeline using Multinomial Naive Bayes and CountVectorizer, achieving ~98% test accuracy on SMS classification.
- Designed an interactive Streamlit UI with real-time predictions, transparency modules (spam confidence + preprocessing preview).
- Dockerized the app and applied MLOps best practices like modularity, version control, and reproducibility.

STACK-OVERFLOW-CLONE   **Live Demo**   **GitHub**
- Built a full-featured Q&A platform with real-time voting, tagging, and profile management using React, Node.js, and MongoDB.
- Achieved 99.9% uptime and supported 100+ concurrent users, with 40% faster API response through optimized backend logic and indexing.

TECHNICAL SKILLS & RELEVANT COURSEWORK

Languages & Frameworks: Python, C++, Java, JavaScript, Rust, React, Node.js, Django, FastAPI
Tools & Platforms: Git, Docker, Linux/Unix, AWS, Azure, GitHub Actions, Postman
Databases: MySQL, PostgreSQL, MongoDB, Redis
Machine Learning: PyTorch, TensorFlow, scikit-learn, Keras, XGBoost, LangChain, spaCy, OpenCV, MMDetection
Systems & Practices: Distributed systems, REST APIs, MLOps, CI/CD, Agile workflows

LEADERSHIP & EXTRACURRICULARS

- **PR & Social Media Lead,** GameDev Utopia - IIIT Kottayam (Sept 2024 – Present)
  Managed GameDev Utopia's Instagram, created promotional material for events, and organized game jams to engage first-year students in game development. Collaborated on branding and outreach strategy.

CERTIFICATIONS

- **The Complete Web Development Bootcamp** – *Angela Yu (Udemy)*   **Certificate**
- **Machine Learning A-Z™: Hands-On Python & R in Data Science** – *Kirill Eremenko (Udemy)*   **Certificate**
- **Full Stack Web Development Trainee** – *NullClasses*   **Certificate**