PRINCE MIREKU

Koforidua, E/R, Ghana
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RESEARCH INTEREST

My research focuses on developing efficient ML architectures for edge devices and exploring multimodal fusion techniques in NLP and Computer Vision, guided by applications in medical imagery and predictive analytics.

EDUCATION

University for Development Studies 2019 - 2023
B.Sc. Computer Science
CGPA: 4.54/ 5.0 | **Rank:** 1/231

RESEARCH EXPERIENCE

Research Assistant 2023 - Present
C.K.T UTAS
Advised by Dr. Mohammed Daabo

- Investigates machine learning algorithms to develop efficient models for budget forecasting and predictive analytics applications in Ghana.
- Investigates how foundational models (Both CV & NLP) can be synergistically applied to downstream tasks within strict computational budgets.

PUBLICATIONS AND ONGOING RESEARCH

(*) denotes equal contribution

Conference Proceedings and Journals

1. Strato Bayitaa* and Prince Mireku*. **The Collective Knowledge of the Crowd: An Ensemble Approach Towards Efficiency and Interpretability in Biomedical AI**
   Ongoing
2. Prince Mireku. **Evaluating the Impact of Generative AI on Medical Imaging and Radiology: A Comprehensive Review**
   Ongoing

Non-Peer Reviewed Publications

1. Prince Mireku* and Mohammed Ibrahim Daabo. **Fault-Tolerant Techniques in Residue Number System for Reliable Arithmetic Operations**
   2023 [Preprint]
2. Prince Mireku* and Edward Opare Yeboa*. **Comparative Analysis of Visual Basic and QBasic: A Comprehensive Study**
   2023 [Report]

INDUSTRY EXPERIENCE

Co-Founder/Solutions Architect 2023 - Present
VimTech Smart Solutions

- Steer the strategic application of predictive analytics using TensorFlow to enhance real-time decision-making.
- Mentor a team of AI enthusiasts by organizing weekly meet-ups and occasional workshops.
- Integrated regression analysis algorithms via Python's scikit-learn into a client's financial service platform, achieving a 93% accuracy rate in predictive tasks.

Full-Stack Developer NSP 2023 - 2024
ReallyGreatTech *Remote*

– Collaborated with Machine Learning Developers and LLM Engineers to design and implement seamless end-to-end applications for medical contexts.
– Developed responsive web interfaces utilizing React and Tailwind CSS, ensuring the precise implementation of high-quality design specifications across various projects.

Software Developer Intern Oct '22 - Dec '22
Falcon Systems *Koforidua, E/R*

– Conducted systematic maintenance and debugging of existing software solutions to enhance system stability and operational functionality.
– Optimized and restructured existing application codebase, achieving significant reductions in load times and enhancements in computational efficiency and performance metrics.

Project Manager 2020 - 2021
FencyWeb *Remote*

– Orchestrated the entire project lifecycle, ensuring seamless integration of planning, and execution.
– Facilitated bi-weekly team meetings to recognize achievements, cultivate a collaborative atmosphere, and promote ongoing enhancements in project outcomes.

Web Developer 2019 - 2022
Founder: DevFreak

– Designed and shared free resources such as single pages, e-commerce websites, Adobe XD design files, etc. Online.
– Managed a YouTube channel with 270+ subscribers providing tutorials in web design and development.

SPOTLIGHT PROJECTS

AscoLab [GitHub]
An automated handwritten pumping test data extractor using ML techniques.
Received positive feedback after initial review by Ghana Water and Sanitation Agency, Koforidua

PalmMed [GitHub] [Demo ↗]
Designed and built a comprehensive app to be used at a hospital setting for heart disease prediction utilizing SVC for model training and LLM for context and report generation.

HONORS AND AWARDS

- **Dean's Award** for Best Graduating Student from Computer Science Department
- **Annual app contest** (Honorable Mention - 4th Place, $100, University of New Mexico.
- **GetFund Scholarship** Beneficiary (1 Trimester, Full tuition)

ACADEMIC SERVICES

Reviewer, Deep Learning Indaba (DLI) Conference, 2024