RAYMOND VIRGILE ALAVO

Ph.D. Student in Analytics · University of Notre Dame

Mendoza College of Business · Department of IT, Analytics, and Operations
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RESEARCH INTERESTS

Human-centered analytics; design and evaluation of LLM and multimodal pipelines for socially-situated applications; conversational AI on social-robot testbeds; user-level pipeline selection informed by personality and session heterogeneity; multimodal mental-health assessment.

EDUCATION

Aug 2026 – 2031 — **Ph.D., Analytics (in progress)**
University of Notre Dame · Notre Dame, IN

Human-centered Analytics Lab. Advised by Prof. Ahmed Abbasi.
Research: human-centered pipelines on a social-robot testbed; predicting the optimal pipeline configuration for each user from personality traits and session heterogeneity across GPU setups.
Coursework: Human-Centered Analytics; Machine Learning & NLP.

Dec 2017 — **M.S., Applied Mathematics & Computer Science**
Indiana University South Bend · South Bend, IN

Jun 2013 — **Engineering Degree, Telecommunications**
École Supérieure Multinationale des Télécommunications · Dakar, Senegal

HONORS & AWARDS

Aug 2017 — **The William J. Knight Scholarship**
Indiana University South Bend

For Academic Excellence in Computer and Information Science.

PUBLICATIONS

Refereed conference papers

1. **Alavo, R.**, Zhang, X., Ademaj, G., Cai, J., Kwon, H., Cotes, R., Clifford, G., & Abbasi, A. **Dash-M5H: An Interactive Dashboard for Multi-Modal, Multi-Model Mental Health Assessment.** *Annual Meeting of the Association for Computational Linguistics (ACL 2026),* 2026. Accepted — poster, Vienna, Austria · July 2026.

2. **Alavo, R.**, Adaikkalavan, R., & Hakimzadeh, H. **IScheduler: Intelligent scheduling system for academic institutions.** *Proceedings of the 23rd Annual ACM Conference on Innovation and*

Technology in Computer Science Education (ITiCSE 2018), 2018. p. 386. doi.org/10.1145/3197091.3205824

Under review / In preparation

New work from the Human-centered Analytics Lab is in preparation.

RESEARCH & PROFESSIONAL EXPERIENCE

Aug 2019 – Present

Data Scientist

University of Notre Dame · Notre Dame, IN

- Designed and deployed LLM pipelines on the QTRobot AI@Edge platform, building a conversational AI assistant persona for reminiscence-therapy and learning studies; lead a doctoral lab experiment analyzing session transcripts to evaluate whether the social robot improves participants' post-treatment learning outcomes (439 participants).
- Built an automated data pipeline to ingest company reports, extract insights, and populate a centralized database — cutting reliance on external data vendors and saving thousands of dollars yearly.
- Developed full-stack ML dashboards across initiatives — a latency-controlled AI chatbot, a simulated-harassment research platform, a crowdfunding simulation, and *Dash-M5H* (ACL 2026).
- Engineered reproducible pipelines and standardized workflows, ensuring research outcomes can be reliably replicated.
- Gathered, cleaned, and synthesized large multi-source datasets into actionable reporting supporting faculty research and publishable scholarly work.

Jul 2018 – Jul 2019

Application Developer

University of Notre Dame · Mendoza College of Business · Notre Dame, IN

Built web applications and secure SQL Server backends to streamline administrative operations for the Mendoza College of Business, including online application forms for Executive Education and a departmental newsletter platform.

Jan 2017 – Jul 2018

Web Technician

UITS · Indiana University South Bend · South Bend, IN

Designed and maintained university web platforms aligned with institutional branding and usability standards, supporting evolving faculty and staff requirements.

Dec 2016 – Jan 2018

Graduate Student Researcher

CS & Information Science Research Lab · IU South Bend · South Bend, IN

Co-developed a data-driven course-scheduling web application (relational database + SQL on a Node.js server); work published and presented at ACM ITiCSE 2018.

Jun 2013 – Jun 2014

Programmer Analyst (Intern) · Network Admin · DBA

REGIOSIS Group · Dakar, Senegal

Designed, deployed, and maintained Enterprise Resource Planning (ERP) systems and databases for business clients.

TECHNICAL SKILLS

Languages	Python, SQL, JavaScript / Node.js, TypeScript
ML & Deep Learning	PyTorch, TensorFlow, scikit-learn
LLM & GenAI	Hugging Face Transformers, LangChain / LlamaIndex, retrieval-augmented generation (RAG), embeddings, vector databases, prompt engineering, speech interfaces (STT / TTS)
Data Engineering	pandas, NumPy, ETL / data pipelines, SQL Server, relational databases
MLOps & Infra	Docker, cloud (AWS / GCP), CI/CD, Git
Edge AI & Apps	QTRobot AI@Edge, on-device LLM deployment, full-stack ML dashboards

SERVICE & LEADERSHIP

Nov 2024 – Present

Communication & Media Team Lead — Online Church Ministry
Volunteer role

Lead an 18-member volunteer team coordinating live-service production and post-production for online worship services.

Hackster Project

Baby Room Watcher (IoT)
Independent project

Room-monitoring system tracking temperature, humidity, and motion with SMS alerts when readings cross predefined thresholds.

LANGUAGES

English	Fluent (professional working proficiency)
French	Native

REFERENCES

Available upon request.