Chris Haleas

[cmhaleas@gmail.com](mailto:cmhaleas@gmail.com) | (773) 606-0989 | linkedin.com/in/chris-haleas/ | chrisiu.github.io

# EDUCATION

**Indiana University, Luddy School of Informatics, Computing, and Engineering** Bloomington, IN

*Master of Science in Computer Science* Expected May 2026

*Bachelor of Science in Computer Science – Cum Laude (Top 10% of Class)* August 2022 – May 2025

**Concentration**: Artificial Intelligence | **Minor**: Data Science | **Certificate:** Entrepreneurship GPA: 3.72/4.00

**Honors and Awards**: Hoosier Scholar Community, CSCI Student Scholarship, Dean’s List

**Relevant Coursework**: Applied Algorithms, Data Analysis & Mining, Principles of Machine Learning, Artificial Intelligence, Product Management, Data Structures & Algorithms, Topics in AI: Trustworthy Machine Learning, Computer Vision, Statistical Inference, Linear Algebra

**Student Involvement**: Kappa Sigma Fraternity (Founding Member, Merchandise Chair), Sparklab Incubator (Co-Founder of StudyBuzz)

# WORK EXPERIENCE

**Humana** | Louisville, KY May 2025 – Present

*AI Engineer Intern*

* Developed a digital care manager to conduct wellness calls to patients with chronic conditions, reducing hospital readmission rates
* Built the backend of digital care manager with Node.js and Fastify using WebSocket for audio streaming, Twilio for call handling, OpenAI GP-4o for conversation generation, Cartesia for text-to-speech, MongoDB for data storage, and Gradio for the frontend
* Generated 100+ synthetic patient records with OpenaAI GPT-4o and stored in MongoDB to simulate real-world healthcare data
* Implemented continuous learning of digital care manager by storing call summaries, enabling the AI to personalize follow-up calls
* Awarded 1st place in Humana intern hackathon by building a full-stack tool to help Scrum Masters automate sprint progress tracking and assess team sentiment from Scrum stand-up recordings using OpenAI GPT-4o for call summarization, VADER for sentiment analysis, and an interactive Gradio frontend
* Presented AI projects to C-level executives, communicating technical details and business impact

**Carnival Cruise Line** | Miami, FL May 2024 – May 2025

*IT Sales and Guest Operations Intern*

* Collaborated with the product management team on booking system modernization project, impacting 30% of the company’s revenue
* Spearheaded the integration of an AI-driven cruise recommendation engine into booking system, personalizing customer experience
* Designed recommendation engine architecture using Collaborative Filtering, Content-Based Filtering, and Adaptive Ranking model
* Led vector search initiative with Microsoft consultants to create a dynamic guest booking lookup in Carnival’s internal systems
* Created Agile user stories for new features using Figma and Microsoft Azure, directing the engineering team’s development
* Contributed to Scrum ceremonies, including feature refinement sessions, sprint planning, and requirements gathering sessions

**Lavner Education** | Chicago, IL June 2023 – August 2023

*Information Technology Intern*

* Managed software setup and technical troubleshooting for 30+ computers to ensure smooth use for students and employees
* Coordinated and supervised the activities of 30+ campers in a tech summer camp, ensuring their safety and well-being
* Provided instruction and guidance to 10 students a day on various aspects of programming and game development fundamentals

# PROJECTS

**Scrollos: AI Research Discovery Platform |** *Python, HTML, CSS, JavaScript, Flask, MongoDB, Firebase Auth, LangChain, GPT-4*

* Developed a full-stack platform for discovering and sharing computer science research papers and materials using Flask and Python, with MongoDB for structured data storage and Firebase Authentication for profile management of users
* Integrated OpenAI GPT-4 and LangChain to summarize arXiv research papers and generate engaging short-form content
* Built a web-app with JavaScript, HTML, and CSS, featuring infinite scroll and intuitive content discovery and upload functionality

**Exploring Empathy of Leading LLMs** for Trustworthy ML Course & Master’s Research | *Python, PyTorch, Gradio, Matplotlib, LLMs*

* Evaluated empathy in AI therapeutic responses by comparing outputs from 4 large language models (LLaMA 3.2, OpenAI GPT-4o, Claude 3.7 Sonnet, Gemini 2.5 Pro) against human psychologist responses, using 35+ anonymous survey evaluations
* Developed an empathy classifier system using BERT-base-uncased with feature-based transfer learning, achieving 0.35 MSE
* Built an interactive Gradio UI to evaluate the empathy of text input and analyzed its robustness against 10 adversarial attacks

**CNNs Against Adversarial Attacks in Face Recognition** for Computer Vision Course | *Python, PyTorch, Matplotlib*

* Fine-tuned 6 Convolutional Neural Networks (EfficientNetB0, ResNet-18, DenseNet121, Inception v1, Regnet X 400MF, SqueezeNet 1.1) using PyTorch and transfer learning for binary classification of real vs. altered facial images
* Engineered black-box adversarial attack pipelines (Gaussian noise, RGB color shift, black patch occlusion) to assess robustness
* Evaluated model performance using F1-scores, confusion matrices, and radar charts; identified DenseNet121 as most resilient

**Content Safety Classification Model** for Trustworthy Machine Learning Course | *Python, PyTorch, Streamlit, Matplotlib*

* Developed and trained an NLP model using RoBERTa architecture to classify text for content safety, achieving 84% accuracy
* Implemented a real-time Streamlit web application that integrates the trained model, allowing users to evaluate content safety
* Designed and conducted adversarial attack demonstrations to identify model vulnerabilities

**NFL Trade Analysis** for Data Analysis and Mining Course| *Python, pandas, scikit-learn, Seaborn, Matplotlib*

* Leveraged a Kaggle dataset to compute composite performance scores for NFL players by position using MinMax scaling of statistics
* Visualized team trends using Seaborn heatmaps and implemented a grading system to evaluate positional strengths across teams
* Trained a scikit-learn logistic regression model to predict team future improvement probability, achieving 65% accuracy

**Fashion Forward** for Artificial Intelligence Course | *Python, pandas, scikit-learn*

* Developed a Fashion Recommendation System, enabling users to receive clothing recommendations based on entered attributes
* Trained and compared K-Nearest Neighbors, Random Forest, and Decision Tree models on 45,000 clothing items with scikit-learn
* Evaluated recommendation accuracy by computing cosine similarity between user preferences and predicted item attributes

**StudyBuzz MVP** for HackTX | *Python, HTML, CSS, JavaScript, PyTorch, Node.js, React, Flask*

* Built an AI-powered web app at HackTX to generate concise lecture summaries; further developed through the Sparklab Incubator
* Trained a Longformer Encoder-Decoder model on a dataset of 6500+ books to generate accurate summaries of lecture video files
* Connected a Python backend to a React.js using Flask to create an intuitive user interface

# SKILLS

**Programming Languages:** Python, Java, R, SQL, JavaScript, HTML, CSS

**Machine Learning & AI Libraries:** TensorFlow, PyTorch, scikit-learn, nltk, Hugging Face (Transformers, Datasets, Hub), OpenCV

**AI Models & Architectures:** BERT architectures, Longformer Encoder-Decoder, Convolutional Neural Networks (CNNs), Neural Networks,   
Natural Language Processing (NLP), K-Nearest Neighbors (KNN), Random Forest, Decision Trees, Large Language Models (LLMs), Logistic Regression, Linear Regression, Support Vector Classifier (SVC), Principal Component Analysis, Deep Learning, Computer Vision Models

**Generative AI APIs & Tools:** OpenAI GPT-4o, Claude 3.7 Sonnet, LLaMA 3.2, Google Gemini 2.5 Pro, Cartesia, LangChain, GitHub Copilot

**Data Analysis & Visualization Libraries:** pandas, NumPy, Matplotlib, Seaborn, Beautiful Soup

**Web Development Frameworks & Libraries:** React.js, Node.js, Flask, Fastify, Gradio, Streamlit

**Development Tools & Platforms:** Jupyter, Visual Studio Code, GitHub, Azure, Figma, Microsoft Office (Excel, PowerPoint, Word), Firebase

**Databases:** MongoDB, SQLite

**Testing Frameworks:** JUnit, pytest

**Spoken Languages:** English (Native), Greek (Fluent), Spanish (Conversational)