Youssef Hassan

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EDUCATION

University of Bridgeport **Sep 2024 – May 2026 (Expected)**
Master of Science in Artificial Intelligence, GPA: 3.88/4.0 *Bridgeport, CT*
Coursework: Natural Language Processing, Computer Vision, AWS, Azure, Data Mining, Web Programming, Machine Learning

University of Connecticut **Aug 2019 – May 2023**
Bachelor of Science in Computer Science *Storrs, CT*
Coursework: Data Structured Algorithms, Object Oriented Programming, Database Management

RELEVANT SKILLS

Analysis and Visualization Tools: Power BI, Tableau, Qlik, Microsoft Excel, Microsoft PowerPoint, Looker, Bash, PowerShell
Programming Languages: Python, Java, JavaScript, SQL, HTML, CSS
Frameworks: Flask, .NET, React, REST APIs, Docker, AWS SageMaker, GitHub, Azure ML, Copilot, Unix
Database Management Systems: Microsoft SQL Server, MySQL, Oracle, R

EMPLOYMENT

University of Bridgeport - *Lab Engineer* **May 2025 – Present**
- Mentored 100+ students on Python, LLMs, and Retrieval-Augmented Generation (RAG) for advanced document search.
- Led projects developing predictive models for churn, recommendations, and lead conversion.
- Introduced agentic orchestration, integrating AI tools into multi-step workflows.
- Designed reusable modules with unit tests and prototyped RPA pipelines to streamline processes.

University of Bridgeport - *Research Assistant* **Sep 2024 – May 2025**
- Built a real-time AI detection system using PyTorch and TensorFlow, focusing on identifying and resolving complex model and system-level issues.
- Diagnosed and debugged complex inference failures and latency spikes, implementing precision-level optimizations that improved edge deployment performance by 30%.
- Presented technical solutions and problem-solving strategies at the NASA CT Space Grant Expo.

PROJECTS

Ben's Pizza Restaurant Management System | *MySQL, Navicat, QuickDBD, MS Excel* **GitHub** **June 2025 – July 2025**
University of Bridgeport | Supervision: Prof. Ausif Mahmood
- Built a SQL database with 10+ normalized tables to manage 100+ customers, 30+ menu items, and staff schedules—cut manual work by 85%.
- Designed schema in QuickDBD, implemented in Navicat, and automated data entry with Excel and SQL scripts.
- Boosted operational efficiency by 60% with optimized queries and real-time tracking.

Yale Research Publication Portal | *Python, JavaScript, Flask, React* **GitHub** **Feb 2025 – May 2025**
Yale University
- Built for a software engineer interview, this full-stack app reduced academic search time by 70% with fast PubMed-integrated APIs and a responsive React UI.
- Implemented scalable backend with versioning, error logging, and CI/CD pipelines to ensure 99.9% uptime and seamless deployment.

Wildfire Detection Model | *Python, YOLO, RT-DETR, PyTorch* **Sep 2024 – May 2025**
University of Bridgeport | Supervision: Prof. Ahmed El Sayed
- Developed a real-time object detection model for smoke/fire detection using aerial, satellite, and infrared images.
- Tested YOLOv11, YOLOv12, and RT-DETR to compare precision, recall, and inference speed—achieved a 22% boost in F1 score with RT-DETR.

LEADERSHIP & AWARDS

IEEE Club - University of Bridgeport | *Secretary* **Present**
- Led and organized IEEE workshops and technical sessions, introducing peers to cloud computing, infrastructure design, and DevOps practices through collaborative learning.
- Fostered hands-on engagement by coordinating with research teams and industry experts, encouraging members to apply engineering principles to real-world challenges in cloud and systems engineering.

3rd Place – UB RISE 2025 Poster Competition **May 2025**
University of Bridgeport | Master's Category
- Recognized for *"Vision-Based Real-Time Wildfire Detection: Deep Learning Approach"* under the guidance of Dr. Ahmed El Sayed. Poster showcased real-time fire/smoke detection using YOLO and RT-DETR models.