Julia Johnson

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EDUCATION

Kennesaw State University May 2026
Bachelor of Science in Computer Science, *Concentration in Artificial Intelligence*
Bachelor of Science in Computer Engineering

RELEVANT SKILLS

Languages: Assembly, HTML, Python, Java, JavaScript, C, C#, C++, SQL, VHDL, MATLAB
Tools and Technologies: Raspberry Pi, STM32 Nucleo Boards, Linux, Unity, Twine, Arduino Boards, AWS
Skills: Machine Learning, FPGA Design, Circuit Analysis, Digital Logic Design

EXPERIENCE

Using Machine Learning to Diagnose Alzheimer's | *MATLAB, Python, Scikit-Learn*

- Worked closely with university staff to project goal and develop plan for implementation
- Utilized CAT12/ SPM12 software to extract information from various MRI images to build custom dataset
- Designed and developed Support Vector Machine (SVM) model to predict normal control, mild cognitive impairment, and Alzheimer's Disease in MRI images
- Expressed results in the form of a research paper, public presentation, and website

Vehicle Emergency Alert System | *Raspberry Pi, Linux, Python*

- Integrated a Raspberry Pi, Bluetooth OBD sensor, and external GPS to gather and store engine and computer data from a moving vehicle
- Created an automatic and manual alert for when unsafe conditions are detected within the vehicle via the OBD sensor
- Utilized rules and buckets in Amazon Web Services (AWS) to send automatic alerts to outside users via email when an alert is triggered and store all vehicle information over time

Cats and Dogs Image Classifier | *Python, TensorFlow, Scikit-Learn*

- Created custom Convolutional Neural Network (CNN) and regular Neural Network (NN) models to classify images of cats and dogs with an accuracy of 85%
- Utilized TensorFlow, NumPy, and Scikit-Learn libraries to create models and adjust train data
- Graphed results with plots to compare model accuracy and loss for each model to determine which model has the greatest performance for the given problem

Shipping Container Optimizer | *Java*

- Collaborated in a fast-paced Hackathon to solve problems involving various shipping container sizes, prices, and order variations
- Created custom Objects for shipping containers and specific items to determine which shipping container is optimal for any given order based on order size and distance to travel
- Utilized user input sales forecast to model an optimized complete order, including quantity and price of each individual item, and ideal shipping container size

Lab Assistant Team Lead; Tutor | *Kennesaw State University*

- Explain coding concepts to 300+ students (loops, if/switch statements, methods, object-oriented programming, GUIs, etc.) using Python, Java, and C#
- Interview, train, and serve as reference for other tutors
- Contributed to successful acquisition of external grant

AWARDS & HONORS

- 3rd Place winner of Kennesaw State's Fall 2023 Innovative Hackathon