

# AIDAN ANDREWS

AI & ML RESEARCHER

## PAST PROJECTS

DEVENEGARAI / AUGUST 2023 - NOVEMBER 2023

### FULL STACK AI/ML ENGINEER

DESIGNED AND EXECUTED ADVANCED MACHINE LEARNING ALGORITHMS, INCLUDING A SOPHISTICATED CONVOLUTIONAL NEURAL NETWORK (CNN), CRUCIAL FOR ACCURATELY PREDICTING HANDWRITTEN DEVANAGARI CHARACTERS, SIGNIFICANTLY ENHANCING THE FULL-STACK APPLICATION'S FUNCTIONALITY AND USER EXPERIENCE.

VOXAI / DECEMBER 2023 - FEBRUARY 2024

### SOLE DEVELOPER

ENGINEERED A LINUX-BASED NVIDIA JETSON-NANO POWERED AI LEARNING ASSISTANT. ADEPT AT TRANSCRIBING LECTURES, INTEGRATED WITH A LARGE LANGUAGE MODEL FOR ENHANCED STUDY SUPPORT, OPTIMIZED HARDWARE FOR SCREENLESS OPERATION.

VGG-19 / AUGUST - DECEMBER 2023

### RESEARCHER

RESEARCHED A VGG-19 CONVOLUTIONAL NEURAL NETWORK MODEL TO CLASSIFY PLANT SPECIES  
IMPLEMENTED VGG-19 DEEP LEARNING ARCHITECTURE, TRANSFER LEARNING TECHNIQUES, AND A CUSTOM SEQUENTIAL CLASSIFIER WITH DENSE LAYERS

## CURRENT PROJECT

CLIMATEPREDICT / MARCH 2024 - PRESENT

### ML ENGINEER

CURRENTLY BUILDING AN LSTM IN RUST USING CANDLE TO DEVELOP AN APP THAT TAKES IN A CARBON EMITTING ACTION, DURATION, AND FREQUENCY, AND PREDICTS THE LOCAL CLIMATE EFFECTS OF THIS ACTION.



I AM AN AI AND ML ENTHUSIAST WITH A STRONG FOUNDATION IN PHYSICS AND COMPUTER SCIENCE, DEDICATED TO USING TECHNOLOGY FOR GLOBAL IMPROVEMENT. I AIM TO RESEARCH AND DEVELOP PRACTICAL SOLUTIONS TO REAL WORLD PROBLEMS.

## CONTACT

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## EDUCATION

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN  
BACHELORS OF PHYSICS MINOR IN  
COMPUTER ENGINEERING

UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN  
MASTER OF COMPUTER SCIENCE

## SKILLS

- |                         |               |
|-------------------------|---------------|
| ⚡ CNN'S                 | ⚡ TENSOR FLOW |
| ⚡ AI/ML<br>APPLICATIONS | ⚡ LINUX       |
| ⚡ ALGORITHMS            | ⚡ HARDWARE    |

COVER LETTER BY

# AIDAN ANDREWS

AI/ML RESEARCHER

TO WHOM IT MAY CONCERN

I AM THRILLED TO EXPRESS MY INTEREST IN THE SUMMER 2024 RESEARCH INTERNSHIP AT QSRI, WHERE I ASPIRE TO LEVERAGE MY ROBUST FOUNDATION IN COMPUTER SCIENCE AND ENGINEERING TO CONTRIBUTE TO GROUNDBREAKING PROJECTS IN HEALTHCARE AND MEDICINE. MY ACADEMIC JOURNEY AT THE UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN, CHARACTERIZED BY AN INTENSIVE COURSE LOAD IN COMPUTER SCIENCE, HAS INGRAINED IN ME A DEEP UNDERSTANDING OF PROGRAMMING, DATA ANALYSIS, AND PROBLEM-SOLVING. SURPASSING STANDARD CREDIT HOURS AND TOPPING MY CLASS, I'VE DEMONSTRATED NOT ONLY MY PASSION FOR TECHNOLOGY BUT ALSO MY CAPACITY TO EXCEL UNDER PRESSURE.

WHAT MAKES ME THE IDEAL CANDIDATE FOR THIS INTERNSHIP IS MY PROVEN TRACK RECORD OF APPLYING THEORETICAL KNOWLEDGE TO PRACTICAL CHALLENGES. MY EXPERIENCE IN DEVELOPING A MECHANICALLY AUTOMATED NFC CARD READER SYSTEM FROM MY DORM ROOM EXEMPLIFIES MY INNOVATIVE SPIRIT AND TECHNICAL PROWESS. THIS PROJECT, ALONG WITH OTHERS LIKE THE DEVANAGARI LANGUAGE LEARNING APP AND CLIMATEPREDICT SYSTEM, SHOWCASES MY ABILITY TO INDEPENDENTLY MASTER NEW TECHNOLOGIES, INCLUDING UNFAMILIAR PROGRAMMING LANGUAGES, CIRCUIT DESIGN, AND 3D PRINTING. MY ACTIVE ENGAGEMENT IN MACHINE LEARNING, PARTICULARLY IN AREAS LIKE COMPUTER VISION AND NEURAL NETWORKS, ALIGNS PERFECTLY WITH THE INTERNSHIP'S FOCUS ON USING COMPUTERS TO SOLVE COMPLEX PROBLEMS THROUGH RESEARCH BASED PROJECTS.

I SEE THIS INTERNSHIP AS A PIVOTAL STEP TOWARDS ACHIEVING MY LONG-TERM ACADEMIC AND PROFESSIONAL GOALS. BY IMMERSING MYSELF IN QSRI'S STIMULATING ENVIRONMENT, I ANTICIPATE GAINING INVALUABLE HANDS-ON EXPERIENCE IN USING MACHINE LEARNING TO SOLVE LIFE CHANGING PROBLEMS THAT HELP PUSH HUMANITY FURTHER IN OUR PURSUIT OF KNOWLEDGE AND SAFETY. THIS EXPERIENCE WILL NOT ONLY ENHANCE MY CURRENT SKILL SET BUT ALSO PREPARE ME FOR MY PLANNED PURSUIT OF A MASTER'S DEGREE AND A PH.D. AS A RHODES SCHOLAR. I AM EAGER TO INTEGRATE THE KNOWLEDGE I WILL GAIN AT QSRI WITH MY ACADEMIC ENDEAVORS TO DRIVE MEANINGFUL CHANGE IN THE WORLD, ESPECIALLY IN THE REALM OF BIOLOGICAL OR MEDICINAL APPLICATIONS.

IN CONCLUSION, MY RELENTLESS PURSUIT OF KNOWLEDGE, COMBINED WITH MY HANDS-ON EXPERIENCE AND FUTURE ACADEMIC AMBITIONS, MAKES ME A STRONG CANDIDATE FOR THE QSRI SUMMER 2024 RESEARCH INTERNSHIP. I AM EXCITED ABOUT THE PROSPECT OF JOINING YOUR TEAM AND CONTRIBUTING TO THE INNOVATIVE SOLUTIONS THAT QSRI IS RENOWNED FOR.

THANK YOU FOR CONSIDERING MY APPLICATION. I AM LOOKING FORWARD TO THE OPPORTUNITY TO DISCUSS FURTHER HOW MY SKILLS, EXPERIENCES, AND AMBITIONS ALIGN WITH THE TRANSFORMATIVE PROJECTS AT QSRI.

A handwritten signature in black ink that reads "Aidan Andrews". The script is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

AIDAN ANDREWS