RICHARD ALVAREZ

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PROFESSIONAL SUMMARY

I am an enthusiastic individual with a strong background in programming, artificial intelligence, and crafting innovative solutions for research and real-world applications. While studying at the University of Chicago, I cultivated my passion for computer science as part of a research team and continued to build on this foundation throughout my undergraduate career at Kenyon.

At Kenyon, I have explored various aspects of filmmaking, ranging from pre-production to post-production, in conjunction with my computer science studies. As part of the unique Integrated Program for Humane Studies' AI curriculum, I spearheaded the development of a multimodal (text/image) generative AI script-writing system, which leveraged a narratology framework inspired by Joseph Campbell's Hero's Journey to generate cohesive stories.

Possessing a discerning eye for visual storytelling, I have honed my skills in video editing and production. In my current human-centric AI course, I am developing an automated video production pipeline to anticipate the virality of brief social media video clips. This project utilizes both computer vision and traditional filmmaking elements, such as shot structure, timing, composition, scene boundary detection, and facial sentiment analysis.

Driven to learn, design, and create inventive solutions that combine traditional software engineering with state-of-the-art AI, I excel at tackling complex real-world challenges that require individual effort, collaboration, and mentorship. I am excited to contribute, collaborate, and innovate at Google this summer, making the most of the opportunity to merge technology with real-world problem-solving.

WORK HISTORY

Research Assistant, 08/2017 - 05/2020
University Of Chicago, Chicago, IL

- Performed longitudinal, qualitative, and quantitative analysis.
- Composed conceptual design and software architecture
- Communicated consistently with project leads
- Programmed extensible, testable JavaScript code for Chrome extensions
- Aggregated relevant research across domains

Video Production Intern, 03/2020 - 08/2020
Private Stock Studios, Chicago, IL

- Assisted in creating written, video and image content for marketing channels.
- Engaged in photography, graphic design and video content creation.

SKILLS

- Research
- Creative Collaboration
- Scikit-Learn
- Keras
- DNNs (Deep Neural Networks)
- NLP (Sentiment Analysis, Topic Modeling)
- Git
- Node.js
- C++
- Python
- React/Next.js

EDUCATION

Bachelor of Arts, Film, Expected in 05/2024
Kenyon College - Gambier, OH
Relevant Coursework

- Sex, Drugs, Guns: Research Strategies in the Contemporary Age
- AI for the Humanities
- Software Development
- Senior Research Seminar

Extracurricular Activities

- Horn Gallery Videographer

Scholarship Recipient

- KEEP

High School Diploma, 05/2020
Walter Payton College Preparatory - Chicago, IL

- Honoree of Leadership Book Award from George Washington University
- Varsity Track and Field

- Remained composed and highly professional in fast-paced and constantly changing environment, effectively handling challenging situations and difficult individuals to achieve objectives.

RESEARCH

HSCHK
I joined as guest research project at the University of Chicago focused on designing a modern and easy-to-use solution to prevent supply-chain attacks and checksums. I worked on researching and implementing a web-browser extension called HSCHK that automatically verifies file checksums over DNS and quarantines possibly malicious files. My contribution to the project included compiling information, writing summaries of articles and papers, and verbally communicating how the extension was being designed and programmed. I co-authored a paper about HSCHK, discussing how the internet becomes more secure by embracing a solution like HSCHK. Through this project, I developed skills as an independent learner and collaborator.

Exploring Short-Format Video Editing Trends using Unsupervised Deep Learning
I undertook a project to analyze trends in short-format video editing by collecting a diverse dataset of videos from various online platforms, using PySceneDetect to extract features related to video editing styles, clustering similar videos using unsupervised DNNs, and visualizing the results using techniques such as t-SNE and PCA. The outcomes included identifying key trends and patterns in short-format video editing, discovering new and innovative editing techniques, and gaining a better understanding of the creative decisions behind popular short-format videos. This project contributed significantly to the field of video production and content creation by providing insights into the creative strategies and editing techniques that engage audiences in today's digital landscape.

Sentiment Analysis of Rotten Tomato Reviews
This project aimed to analyze the sentiment of user reviews on Rotten Tomatoes to gain insights into the psychology of movie consumers and evaluate the reliability of user reviews. The study found that approximately 73% of the reviews were consistent across sentiment analysis and 'freshness', indicating that VADER is a strong tool for sentiment analysis and people on Rotten Tomatoes are mostly reliable. The study also suggests that Rotten Tomatoes could potentially improve the reliability of its reviews by filtering for more consistent reviews.