RICHARD ALVAREZ

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PROFESSIONAL SUMMARY

I am passionate about programming, artificial intelligence, and building innovative solutions for both research and real-world problems. At the University of Chicago, I discovered my love for computer science as part of a research team, and my passion continues to grow through undergrad.

At Kenyon, I have studied many aspects of filmmaking, from preproduction to post, alongside my computer science studies. As part of our unique Integrated Program for Humane Studies' AI curriculum, I led the development of a multimodal (text/image) generative AI script-writing system. We hierarchically generated cohesive stories using a narratology framework derived from Joseph Campbell's Hero's Journey.

With a keen eye for visual storytelling, I am skilled in video editing and production. In my current human-centric AI course, I am designing an automated video production pipeline to predict the virality of short social media video clips. I'm using both computer vision and traditional filmmaking elements, including: shot structure, timing, composition, scene boundary detection, and facial sentiment analysis.

I am eager to learn, design, and build creative solutions that merge traditional software engineering with cutting-edge AI. I thrive at the intersection of technology and complex real-world problems that involve individual effort, collaboration, and mentorship. I would deeply appreciate the opportunity to help contribute, collaborate, and innovate at Google this summer.

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

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

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.