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PROGRAM Recruiter

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Company

Dear Recruiter,

My career aspiration is to become an R&D-type industry researcher. My research interests include artificial intelligence, programming languages, and virtual reality. I have realized that all of these subfields of computer science are deeply linked to medical fields and can be used to solve a number of problems in these areas.

My motivation for pursuing research related to artificial intelligence stems from my recent summer research with Prof. Merritt where we have explored the 2016 influence campaign launched and executed by Russian IRA (so-called Internet Research Agency). We have utilized a number of data mining, data analysis, and machine learning techniques in order to both analyze the persuasive strategies utilized in this campaign as well as to make future predictions based on the data that we obtained by scraping the PDF files made publicly available by House Intelligence Committee. Besides, a number of binary image classifiers were trained in order to classify images based on the type of discord it spreads (whether it is race-based, religion-based, etc). This research experience showed me the diverse uses of AI and made me think about its ethics as our work was revolving around the topics that are so sensitive to people. Coming from a family of neurosurgeons, pharmacists, and doctors, the emergence of AI made me wonder about its applications in medical domains. Ultimately, I have applied to and been accepted at the Kern Center for the Science of Health Care Delivery and starting coming spring, I will be working alongside Dr. Wang and Dr. Shen on natural language processing and translational science projects in order to facilitate secondary use of EHRs for clinical and translational science research and health care delivery improvement through artificial intelligence, informatics, and data science approaches.

My fall semester directed research with Dr. Zaring has sparked my interest in programming languages. I have gained experience in writing type-checking rules and in designing and extending a programming language. The research included both theoretical work with the mathematicological aspects of the language's (CCL) specification and practical work with the existing processors for the language. I have designed a number of new operators for the language's type system as well introduced the notion of compound/container types to the language. The important lesson I have learned during the research is that one can come up with a language with a particular problem in mind in lieu of forcing a language, adjusted for some other uses, to fit the problem. I aspire to create languages and tools that can improve software quality and security and increase programmer productivity for both medical and non-medical scientists, researchers, and workers.

Recently, I have developed a keen interest in virtual reality and its applications in medical fields. As a result, I have worked on a few projects involving VR technologies using Unity, 3ds Max, Z Brush, and Substance Painter. That said, as of now, I am largely inexperienced in the field, but am open to

any project involving medical VR technologies.

The description of the program has given me a sense that PROGRAM is a great match for my interests!

See my [website](#) for research papers, projects, reports, and more!

Sincerely,

David Oniani