Dear Faculty Search Committee,

I am applying for the tenure-track faculty position of Assistant Professor in your department. I am a PhD student in the Allen School of Computer Science and Engineering at the University of Washington, advised by Dan Suciu. I expect to graduate in 2023.

I conduct research at the intersection of Databases and Programming Languages. My research improves the modern data analytics pipeline by developing languages, theory and tools for programming data at scale. This includes a new Datalog-based programming language for iterative computation over tensor-like data, a new join algorithm, and various optimization techniques. These results make it possible to perform complex computation over massive data with unprecedented efficiency. My work has been recognized with three best paper awards, at PODS, POPL, and OOPSLA. The techniques I developed have been implemented in the commercial product of RelationalAI, and the systems I built have been used by dozens of research and industrial projects.

I have extensive experience as a teaching assistant for courses in both Databases and Programming Languages. As an undergraduate student at Tufts University, I had been a TA for our Programming Languages course for two years. Students with no experience in functional programming finish the course by implementing an ML-style language with full type inference. During graduate school, I have been part of the teaching staff of every Databases course in the undergraduate and master's curriculum. My students have built query optimizers and transaction processors, and have become familiar with a variety of modern cloud data systems. Outside of the classroom, I have mentored students who are interested in research. One of them is now a lead instructor of our Databases course, and another won 1st place in the PLDI Student Research Competition.

Enclosed are my CV, research statement, teaching statement, and diversity statement. Please contact me if you have any questions. These materials are also available on my website at `https://remy.wang`. Thank you for your consideration.

Sincerely,

Yisu Remy Wang

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