Summer Emerging PhD Program Statement

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Growing up as an American-born Chinese between rural China and the United States shaped my perspective on education and research. Moving frequently between these contrasting environments—from a resource-scarce village in Shanxi Province to schools in Beijing, Shanghai, and the U.S.—I navigated significant educational and cultural transitions that prepared me for the academic challenges of doctoral studies.

My decision to pursue a PhD stems from both personal experiences and academic passion. The technical foundation I gained from China's structured STEM curriculum, combined with the creative thinking fostered in U.S. schools, ignited my interest in computer vision and artificial intelligence research. My research journey began during the pandemic when I worked with professors at Tongji University on low-level computer vision problems. At USC's iLab, I focused on data-centric methods for synthetic dataset generation, work that garnered over 50 citations. During my Master's degree and internship at Microsoft Research Asia, I led the creation of a million-scale dataset for radiology report generation, collaborating with medical professionals from local hospitals. Currently at Stanford University's Vision and Learning Lab, I'm modeling real-world motion distributions of articulated objects through inverse rendering, developing a large-scale video processing pipeline that automatically gathers and processes videos to create datasets for 3D/4D reconstruction. My research interests center around helping vision models understand complex distributions and dynamics of our world through data-centric approaches. I believe addressing the insufficiency of high-quality data is crucial for enabling models to interpret and simulate realistic movement.

The Summer Emerging PhD Program could be a critical stepping stone in my academic journey towards graduate research and life at UIUC, helping me with transition to a new academic environment after experiences across multiple institutions. The program's focus on graduate school culture would help me understand expectations and strategies for success in a top-tier computer science research institute. Networking with current graduate students would provide insights into research groups and collaboration opportunities. Spending days with the department would give me firsthand exposure to my future advisors, collaborators, and research facilities aligned with my interests in computer vision and AI. The graduate school sustainability seminars would equip me with strategies for maintaining work-life balance and long-term productivity.

My cross-cultural background has taught me that diversity drives innovation through the exchange of unique perspectives. At USC, I mentored international freshmen from China through the Chinese Student Association and facilitated collaborations between Chinese and international peers by fostering inclusive group project environments. Through my research experiences across institutions and countries, I've developed the ability to bridge cultural and disciplinary gaps and integrate diverse viewpoints into technical work. My internship at Microsoft Research Asia, working with healthcare professionals and AI researchers, taught me how interdisciplinary collaboration creates technology that addresses real-world challenges. At UIUC, I would continue this commitment to inclusion by actively participating in initiatives supporting underrepresented students in computer science. Drawing from my experience navigating educational barriers, I would work to create supportive peer networks where diverse perspectives are valued. My technical expertise in data-centric approaches to computer vision, combined with my cross-cultural communication skills, positions me to contribute meaningfully to UIUC's research community. The Summer Emerging PhD Program would provide me with the foundation to thrive in graduate studies while contributing to a vibrant, inclusive academic community committed to using technology to address pressing societal challenges.