

June 6, 2024

address line 1
address line 2
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address line 4

Dear Members of the Search Committee,

I am submitting my application for the tenure-track Assistant Professor position within the Computer Science Department of [...]. Currently, I am a CRA/CCC NSF-funded postdoctoral fellow at Northwestern University, having completed my Ph.D. in Computer Science at Brown University. I pursue advancements in human-computer interaction (HCI) and visual computing, with a specific focus on visualization. The heart of my research involves visualizations of predictive models, building upon insights from fields like statistics and psychology. This specialization aligns with [...]'s commitment to research and education, and I am confident that I will be a valuable addition to your institution.

My research aims to build user trust in predictive models and guide individuals towards more appropriate decisions, particularly in areas such as election forecasts and machine learning recommenders. A defining feature of my work is its systematic interdisciplinary methodology, as exemplified by a project with ten authors that I led during the 2022 U.S. midterm elections. I forecasted 33 gubernatorial elections using Bayesian modeling, built a forecasting website to deploy uncertainty visualizations of my forecast, and executed a longitudinal real-time experiment on the real-world impact of these visualizations. This work was honored with a best paper award at the top-tier IEEE VIS conference in 2023, with the Best Papers Committee stating, "The experimental results offer intriguing insights into the effects of these uncertainty visualizations on viewer emotions, trust, and intention to vote." Likewise, I have received three other honorable mention awards at the leading conferences of ACM CHI 2023, IEEE VIS 2021, and ACM IUI 2020, all as a first author.

In the next phase of my career, I aim to facilitate fairer and more objective decision-making processes for both individuals and organizations. I plan to broaden my focus beyond predictive models to include other advanced computational techniques, such as generative models, and extend this approach to application domains like public policymaking. To sustain and grow my research laboratory, I will actively pursue federal grants such as NSF, leverage my industry connections with companies such as Adobe and Google, and also explore university-level opportunities. My experience includes helping assemble two NSF proposals and submitting four fellowship applications, one of which secured the CRA/CCC funding for my postdoctoral research. This history of funding acquisition reinforces my confidence in obtaining the necessary resources.

In addition to my research endeavors, I have extensive experience in teaching and professional service. I co-instructed a conference course on open science three times, and gave three guest lectures at Northwestern University for the *Interactive Visualization* course. I served as a graduate teaching assistant over nine semesters at Brown University and Tufts University, contributing to five computer science courses, including *Visualization* and *Data Science*. Looking ahead, I plan to teach courses in visualization, HCI, and data science to cultivate the next generation of computational thinkers. Beyond the classroom, I have directly or jointly mentored three undergraduates and five Ph.D. students, resulting in three top-tier publications. As a Student Volunteer chair for IEEE VIS from 2017 to 2020, I facilitated educational and networking opportunities for hundreds of students from around the globe. Furthermore, I have reviewed nearly one hundred papers and have served on the program committees for leading conferences such as ACM CHI and IEEE VIS.

[...]

I welcome the opportunity to discuss how my background aligns with and furthers the goals of [...]. Enclosed are my curriculum vitae and statements of research and teaching philosophies. Letters of recommendation will arrive separately. Should you require any further information, I am readily available and would be pleased to provide it. You may reach me at 617-849-0164 or via email at fy@northwestern.edu. I appreciate your consideration and look forward to hearing from you.

Sincerely,

A handwritten signature in black ink that reads "Fumeng Yang". The script is fluid and cursive, with the first letters of "F" and "Y" being significantly larger and more decorative than the rest of the letters.

Fumeng Yang, Ph.D.