2019

VIRTUAL FACULTY MENTORING: CAN IT BE ACCOMPLISHED THROUGH EMBODIED CONVERSATIONAL AGENTS?

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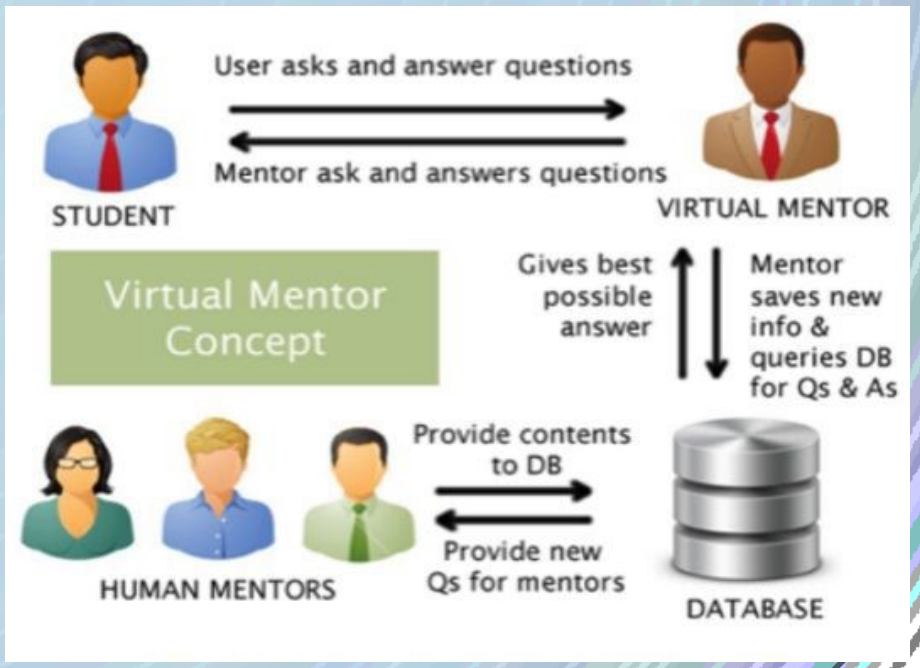
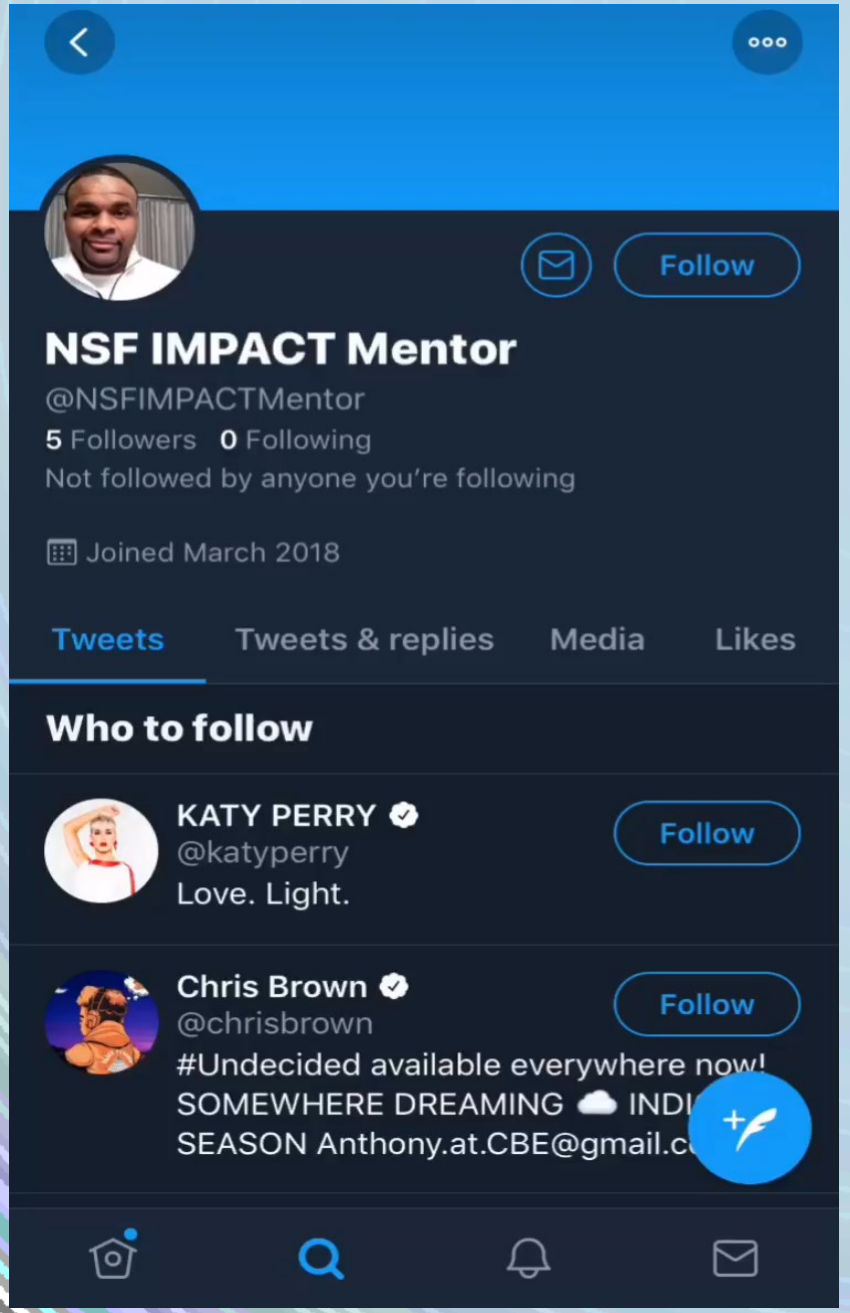
NSF INCLUDES AWARD (17-4458)

- Embodied conversational agents (ECAs) for virtual faculty mentoring are being developed under the IMPACT mentoring program
- Other Goals of the Award:
  - Document project partners' efforts in supporting underrepresented minority (URM) faculty and engaging retired faculty in academia
  - Deploy a national survey of engineering colleges to (1) develop a sampling frame for IMPACT mentoring participants and (2) establish an understanding of the ways in which higher education institutions engage retired faculty
  - Achieve 20 "goal mentoring matches" of URM and retired engineering faculty

EMBODIED CONVERSATIONAL AGENTS

- The IMPACT award includes a pre-pilot rendition of a Virtual Mentoring System using ECAs
  - In this case, a mentee (i.e., doctoral student, postdoctoral fellow, early-career faculty member) would ask career advice questions of an ECA, who draws responses from a pre-programmed database populated with content by renowned emeriti engineering faculty




Follow
NSF IMPACT Mentor
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5 Followers 0 Following
Not followed by anyone you're following
Joined March 2018
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Likes
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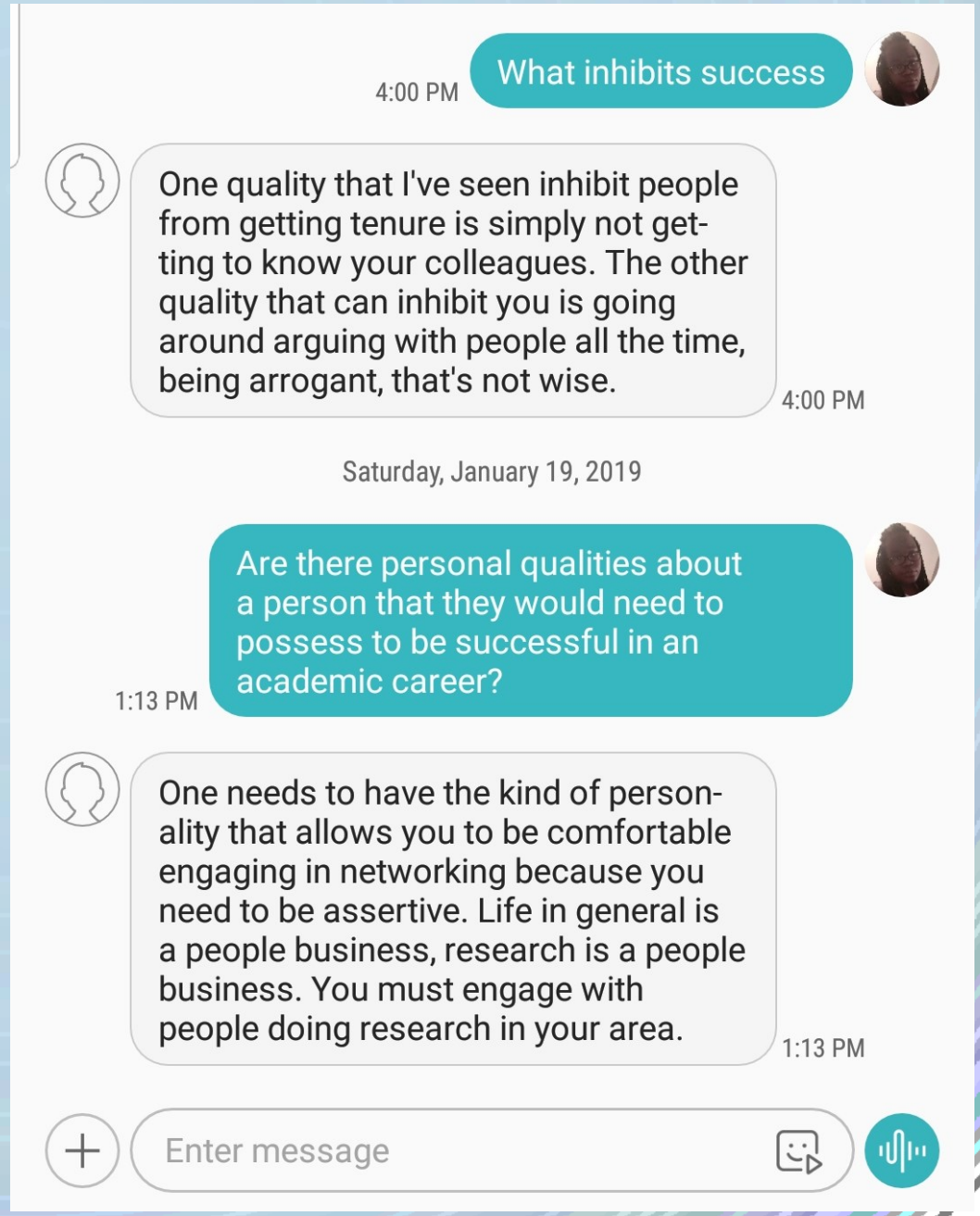

4:00 PM
What inhibits success
One quality that I've seen inhibit people from getting tenure is simply not getting to know your colleagues. The other quality that can inhibit you is going around arguing with people all the time, being arrogant, that's not wise.
4:00 PM
Saturday, January 19, 2019
Are there personal qualities about a person that they would need to possess to be successful in an academic career?
1:13 PM
One needs to have the kind of personality that allows you to be comfortable engaging in networking because you need to be assertive. Life in general is a people business, research is a people business. You must engage with people doing research in your area.
1:13 PM
Enter message

EMBODIED CONVERSATIONAL AGENTS EFFICACY

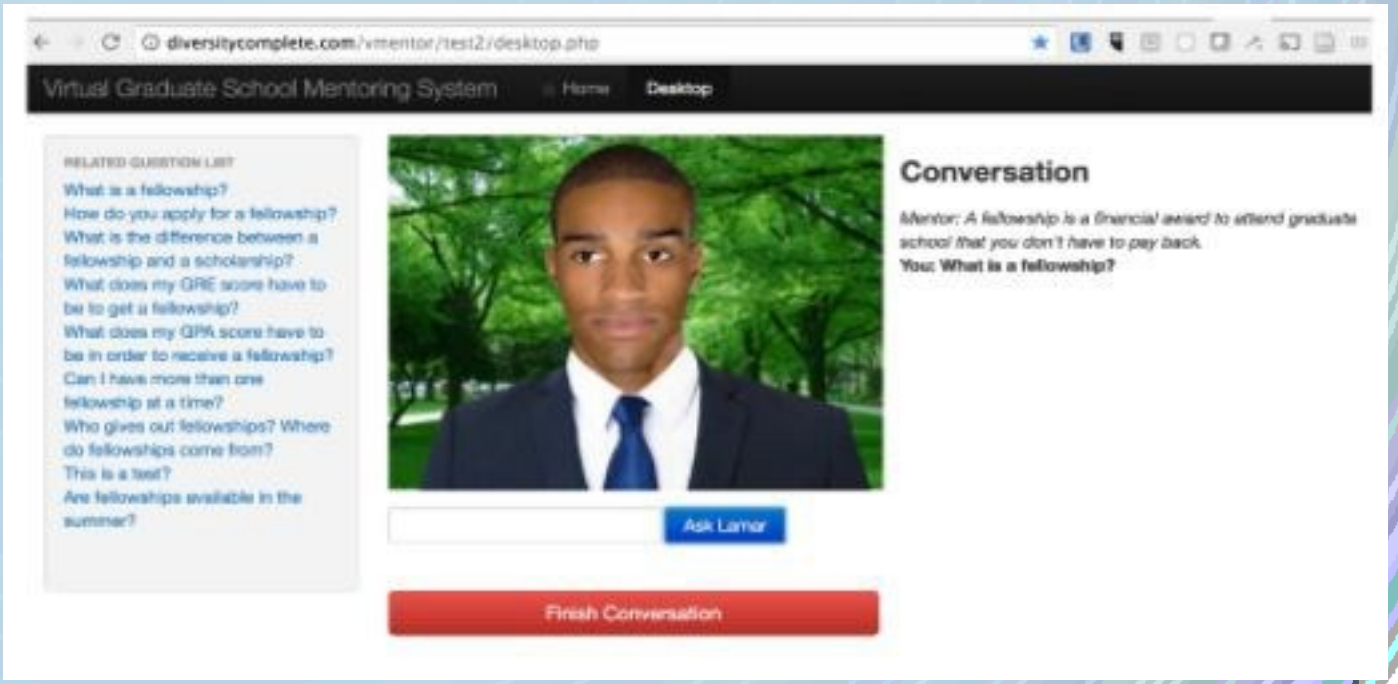
- Do you think faculty mentoring can be accomplished through automation and digitization?
- Would you be satisfied with a virtual mentoring experience?
- Do you think emeriti faculty perspectives are relevant and useful?

STUDYING EMBODIED CONVERSATIONAL AGENTS

- Despite the myriad of roles ECAs have been engineered to fulfill, little research addresses ECAs for faculty mentoring
- Initial ECA research suggests faculty mentoring can be effectively accomplished with ECAs, higher effectiveness ratings are a result of user satisfaction, perceived utility, and feelings of emotional-relatability
- The scalability of ECAs for faculty mentoring make this an ideal mechanism to support the career success of faculty across the professoriate

NEXT STEPS

- Conduct additional interviews for ECA content
- Develop a framework for finalizing ECA dialogue
- Develop the chatbot for the ECA
- Test the chatbot with various stakeholders



ACKNOWLEDGEMENTS

- The IMPACT mentoring program and concurrent research projects are sponsored by the National Science Foundation INCLUDES (Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science) Design and Developments Launch Pilot (17-4458)

- For more information on IMPACT, please visit: https://www.uccs.edu/impact/

ECA REFERENCES

- Beale, R., & Creed, C. (2009). Affective interaction: How emotional agents affect users. *International Journal of Human-Computer Studies, 67*, 755-776.
- Berry, D. C., Butler, L. T., & de Rosis, F. (2005). Evaluating a realistic agent in an advice-giving task. *International Journal of Human-Computer Studies, 63*, 304-327.
- Bickmore, T. W., Caruso, L., Clough-Gorr, K., & Heeren, T. (2005). 'It's just like you talk to a friend' relational agents for older adults. *Interacting with Computers, 17*, 711-735.
- Gosha, K. (2013). The application of embodied conversational agents for mentoring African American STEM doctoral students. *All Dissertations,* 1099.
- Gosha, K., Huff Jr., E. W., & Scott, J. (2018). *Computing career exploration for urban African American students using embodied conversational agents: Poster abstract*. In SIGMIS-CPR '18: 2018 Computers and People Research Conference, Buffalo-Niagara Falls, NY.
- Lee, S. Y., & Choi, J. (2017). Enhancing user experience with conversational agent for movie recommendation: Effects of self-disclosure and reciprocity. *International Journal of Human-Computer Studies, 103*, 95-105.