My CAREER journey

What to do (and not to do) when you’re applying for a CAREER award…
Hello! I’m Bart!

Current: Clemson University
   Associate Prof. in Human-Centered Computing

UC Irvine
   PhD in Informatics (privacy)

Carnegie Mellon
   M in Human-Computer Interaction

TU Eindhoven
   Researcher & Teacher
   MS in Human-Technology Interaction (recommender systems)
   BS in Innovation Sciences
Before my CAREER journey...

Started at Clemson in 2015

- Samsung gift + NSF EAGER: Usable privacy for IoT
- US Army contract: Privacy for training systems
- Facebook fellowship student: User-tailored privacy

Wanted to get back into (funded) recommender systems research

- NSF CRII: Recommender Systems for Self-Actualization
General idea: Recommender Systems mistakenly assume that your preferences are known

Problem: Many people often don’t know what they really want

Solution: Subvert recommendation algorithms to help users explore their preferences

First submitted to the ACM RecSys “Past, Present, Future” track

Included a “beyond the CRII award” section that became my CAREER proposal

Focused on algorithmically generated preference visualizations and preference communities
NSF CAREER: first try (2018)

Take a topic you’re passionate about
I had advocated for user-centric research in this field for a decade

Present a bold idea that covers a gap in existing work
I selected a “High risk, high reward” idea

Make a meaningful theoretical contribution
NSF CRII and RecSys had accepted the theoretical foundation
Meaningfully integrate your education plan with your research

<table>
<thead>
<tr>
<th>Proposed Work</th>
<th>Outcomes</th>
<th>Future Work</th>
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<tbody>
<tr>
<td>SA1: Create a toolkit for the live deployment and user-centric evaluation of recommender systems</td>
<td>A generic decision support platform for RSSA research</td>
<td>Develop new user-adaptive decision-support systems for self-actualization</td>
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<tr>
<td>RO1+2: Design, implement and evaluate preference-based communities and personalized preference profiles</td>
<td>User-centered design &amp; evaluation of two new interaction mechanisms</td>
<td>Apply these interaction mechanisms to other domains</td>
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<tr>
<td>RO3: Build and evaluate live systems for career planning and volunteering</td>
<td>Live systems that provide career and volunteering advice</td>
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<td>EO1: Elementary school summer camp activity on reading preferring</td>
<td>Grad students trained on recommender system development</td>
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<tr>
<td>EO2: Research experience on career goals and college choice</td>
<td>Introduce students of all ages to the concept of &quot;self-actualization&quot;</td>
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<td>EO3: Undergrad elective on personal development</td>
<td>Establish outreach activities that integrate with future research activities</td>
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<td>EO5: Activity for retirees about volunteering and civic engagement</td>
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**Figure 1:** Overview of proposed research, education, and outreach objectives; expected outcomes; and future work.

Your education plan can go beyond the college classroom

My plan included K-12 summer camps, high school visit days, undergrad and graduate education, and working with retirees
**NSF CAREER: first try (2018)**

**Make it internally consistent**

**Reviewers love it when a plan comes together!**

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**Figure 1:** Overview of proposed research, education, and outreach objectives; expected outcomes; and future work.

**Plan for 5 years, but write for 10**

I included examples of future work beyond the CAREER award, showing how it would kickstart my research career
NSF CAREER: first try (2018)

Verdict: Low Competitive (VG/G, G, P)

Main issues:

- Not enough engagement with prior work in the broader field
- Internal inconsistencies in the theoretical foundation
- CRII award has not produced a lot of concrete results
- Best reviewer: “This is a strong proposal. The Spice Girls quote was distracting and unnecessary.”
Talk to lots of different people about your proposal

I asked outsiders, senior scholars for comments on the proposal + reviews

Delve into the theory

I theoretically reconceptualized the proposal without changing the broader ideas / specific tasks

Turn a weakness into a positive

I acknowledged the lacking CRII results and proposed a solution
In checking on my proposal, I noticed something weird...

Division: Office of Advanced Cyberinfrastructure (OAC)

Proposals get moved sometimes... maybe ask why?

Turns out our pre-awards office had submitted the proposal to the wrong directorate!

Verdict: Low Competitive again (G, G, G/F, VG, F)

Not terrible, given the circumstances
NSF CAREER: third try (2020)

Triple-check whether your proposal is submitted correctly

Seriously...

If you’re confident about it, don’t change it

In this round I mostly clarified reviewer misconceptions
Verdict: Highly Competitive! (E, VG/G, G)

It got awarded!
Once you get the award...

Create a team of students

I aim to create an environment where students learn more from each other than from me

Find creative solutions for things that don’t work out

As the pandemic continued, I made several changes to my research approach

Don’t ignore interesting research rabbit holes

I do cool spin-off projects aligned with the interests of my students and favorite colleagues
Submit supplementary award proposals

I didn’t do REU/RET for this project (yet), but got a CLB

Share your proposal with others

I still do this, despite some negative experiences
Thank you!

Proposal tips:
- Take a topic you’re passionate about
- Present a bold idea that covers a gap in existing work
- Make a meaningful theoretical contribution
- Meaningfully integrate your education plan with your research
- Your education plan can go beyond the college classroom
- Make it internally consistent
- Plan for 5 years, but write for 10
- Talk to lots of different people about your proposal
- Delve into the theory
- Turn a weakness into a positive

Post-award tips:
- Create a team of students
- Find creative solutions for things that don’t work out
- Don’t ignore interesting research rabbit holes
- Submit supplementary award proposals
- Share your proposal with others

Feel free to email me at bartk@clemson.edu!