Jeffrey (Jeff) Black

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Objective

Seeking a position that allows me to employ my extensive experience in software engineering and more recent expertise in user research to deliver **innovative** and **thoughtful** software experiences.

Professional Experience

Graduate Researcher | ***AVANT Lab*** | *Python, R, PsychoPy, User Research, Data Analysis* ***Aug 2021 – Pres***

- Leveraging Python, PsychoPy, and R to streamline and automate experiment programming and analyses.
- Pioneering scalable methods for researching digital scams and misinformation in over 10 publications.
- Directing a team of 9 undergraduate students to boost speed of research processes 10x.
- Working on a $5,000,000 NSF-funded project to create programs to shield older adults from digital deception.
- Helped over 100 students learn statistics by assisting in research design and statistical methods courses.

Software Engineering Intern | ***Infor - Public Sector*** | *C#/.NET, OAuth 2.0, SFTP, TDD, Agile* ***Jun 2021 – Aug 2021***

- Contributed to development of a C#/.NET-based ERP system used by over 3,900 public sector organizations.
- Implemented OAuth 2.0 to enable in-app access to SharePoint APIs and content.
- Provided support for SFTP within the systems' in-app file manager, enabling access to SFTP file systems.
- Delivered emergency hotfix, enabling users to view .msg files within the in-app file viewer.
- Diagnosed a critical production-only error that prevented several critical interfaces from displaying.
- Employed test-driven development and code reviews to ensure highest quality of delivered features.

Software Engineering Intern | ***Dock Blocks/SMI*** | *JavaScript, HTML/CSS, 3D, Material Design* ***May 2018 – Aug 2018***

- Built an app with JavaScript and three.js that reduced time to make 3D visualizations of docks by 99%.
- Led training sessions on Google's Material Design guidelines, improving communication with clients.
- Participated in business meetings, discussing business strategy and demoing the 3D dock modeler.

Projects

Retiree Volunteerism RecSys | *User Research, Data Analysis, Prototyping, UX* | *Report* ***Aug 2022 – Dec 2022***

- Led a user-centered design team to build systems that recommends volunteering opportunities to retirees.
- Ran 6 field interviews and Grounded Theory analyses to craft a theory of how retirees decide to volunteer.
- Created 3 prototype recommender systems with varying support for retiree volunteers' decision-making.
- Designed a user study to quantify the effect of different levels of decision-making support on user experience.

Project APEx | *User Research, Data Analysis, Data visualization, UX* | *More info* ***Nov 2021 – Feb 2022***

- Helped the South Carolina Research Authority study industry attitudes towards assistive exoskeletons.
- Employed usability surveys and field interviews at the SCRA Exoskeleton Demo to gather data for analysis.
- Analyzed and reported usability data, aiding SCRA in identifying barriers to assistive exoskeleton adoption.

Better Truckers | *JavaScript, React, Material-UI, AWS, Serverless, Azure, Agile, UX* | *Demo* ***Jan 2021 – May 2021***

- Created a serverless service that rewards truckers for safe driving via a point-based rewards system.
- Led frontend development, using ReactJS and Material-UI to create intuitive and appealing interfaces.
- Developed over 50 serverless functions and APIs in AWS to transform data and supply it to the frontend.
- Leveraged Azure DevOps to organize team goals and track progress, allowing us to stay on schedule.
- Selected to present the app to AWS at Clemson University's corporate partnership demos.

Project Kestrel | *Unity, C#, OOP, Game Design, Game Development, Agile* | *Demo* ***Jan 2021 – May 2021***

- Developed a 2D action game using Unity and C#, featuring astronauts on a spaceship fighting alien invaders.
- Built a versatile movement system, enabling movement for players and NPCs with a one-step process.
- Crafted a modular, physics-based weapon system, enabling creation of dynamic weapons via a menu.
- Spearheaded level design, creating modifiable templates and level transitions to streamline level creation.

Education

Clemson University ***Aug 2017 – Pres***

M.S. in Human Factors Psychology (4.00 GPA) *Aug 2021 – May 2023*

B.S. in Computer Science, minor in Psychology (3.81 GPA) *Aug 2017 – May 2021*

Publications

In Progress

Deception Awareness and Resilience Training | *Media Forensics Hub and Collaborators* | *Read more*

Assisting in an NSF-funded project that is creating tools that are specifically tailored to train older adults to recognize and protect themselves from digital deception.

Individual differences in vulnerability to phishing, fake news, and vishing | *Black, J.*

Master's thesis on whether users who fall for one form of digital deception (e.g., phishing) also fall for other forms of online deception (e.g., fake news, phone scams), and why.

Towards a theory of general online inauthenticity | *Black, J., Warren, J., Sarno. D.M., Warren, P.L.*

A scoping literature review to devise a theory of online inauthenticity that spans across different digital deception domains, including phishing emails, fake news, and social media trolls.

Phishing detection under time pressure | *Black, J. & Sarno., D.M.*

A user study to investigate how time pressure (i.e., strict time limits) affects peoples' ability to detect phishing emails. Designed, conducted, analyzed, and wrote the manuscript for the study.

Gamified phishing detection training | *Sarno, D.M. & Black, J.*

A user study about how game-like elements in an anti-phishing training exercise may be able in increase motivation for users to engage in such training.

Under Review / Completed

Sarno, D.M., Black, J. (Under review). Who gets caught in the web of lies?: Understanding susceptibility to phishing emails, fake news headlines, and scam text messages. *Human Factors and Ergonomics Society*

Sarno, D.M., Harris, M., Black, J. (Under review). Which phish is captured in the net? Understanding phishing susceptibility and individual differences. *Applied Cognitive Psychology*

Sarno, D.M., Black, J. (2022, October). Fall for one, fall for all: Understanding deception detection in phishing emails, scam text messages, and fake news headlines. *Human Factors and Ergonomics Society 66th Annual Meeting*

Sarno, D.M., Black, J**.,** Harris, K., Harris, M., Koontz, P., Paradise, E. (2022, April). Fool's gold: Digital literacy and impulsivity predict susceptibility to multiple forms of online deception. *Clemson University 17th Annual Focus on Creative Inquiry Forum*

Harris, M., Black, J**.**, Sarno, D.M. (2022, April). Caught in the net: Predicting phishing susceptibility across the lifespan. *Clemson University 5th Annual Student Research Forum*

Sarno, D.M., Black, J., Paradise, E., Stokx, J., Summers, M. (2021, November). Predicting phishing susceptibility using the phishing awareness scale (PAS). *Psychonomic Society 62nd Annual Meeting*