

Fabian Okeke N.

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RESEARCH INTERESTS

My research focuses on designing, building and evaluating behavior change technologies for low resource contexts. I work at the intersection of Behavioral Science, HCI, and ICTD through fieldwork with target populations.

EDUCATION

Cornell Tech, Information Science, PhD Candidate; Computer Science, Minor.

Committee: Deborah Estrin (chair), Nicola Dell (co-advisor), Tanzeem Choudhury.

Cornell University, Computer Science, MS; Information Science, MS.

Vanderbilt University, B.Eng, Computer Engineering (May 2014).

Fisk University, B.Sc, Computer Science (May 2014).

HONORS AND AWARDS

- Cornell Merit-Based Fellowship for Top of Incoming Class (2014 – 2015).
- Vanderbilt Merit-Based Scholarship (2012 – 2014).
- Fisk Merit-Based Provost Scholarship (2009 – 2012).
- Eta Kappa Nu, Electrical and Computer Engineering Honor Society (2012 – 2014).
- Dean’s List, Vanderbilt University – (Fall 2012, Spring 2013).
- Best Research Award, Fisk 14th Research Symposium Presentation (2012).
- Awarded 1st position in FlyMajor Scholarship Award for HBCU's in Tennessee (2009).

RELEVANT PUBLICATIONS

1. A. Vashistha, **F. Okeke**, R. Anderson, N. Dell. “You can always do better!”: The Impact of Social Proof on Participant Response Bias [in submission].
2. **F. Okeke**, M. Sobolev, N. Dell, D.Estrin. “Good Vibrations: Designing and Evaluating a Ubiquitous Intervention for Reducing Digital Consumption” [in submission].
3. **F. Okeke**, F. Alquaddoomi, D.Estrin. “Towards cross platform digital tracking with VPN architecture” [Technical Report].
4. **F. Okeke**, G. Leshed, JP Pollak, D.Estrin. “Calendars are for grownups: on time management coaching for college students” [in submission].
5. Rabbi, Mashfiqui, Jean Costa, **Fabian Okeke**, Max Schachere, Mi Zhang, and Tanzeem Choudhury. "An intelligent crowd-worker selection approach for reliable content labeling of food images." In *Proceedings of the conference on Wireless Health*, p. 9. ACM, 2015.
6. Sandstrom, Gillian M., Vincent Wen-Sheng Tseng, Jean Costa, **Fabian Okeke**, Tanzeem Choudhury, and Elizabeth W. Dunn. "Talking Less during Social Interactions Predicts Enjoyment: A Mobile Sensing Pilot Study." *PloS one* 11, 2016.

CURRENT RESEARCH

Supporting Youth Entrepreneurs in Rural Senegal

- Partner with Dimagi and UNCDF to design and develop toolkits for youth entrepreneurs to effectively manage microfranchises in rural Senegal.
- Design behavioral experiments and conduct semi-structured interviews to uncover latent needs of youth entrepreneurs, challenges at the ground level and complexities across the microfranchising continuum.

Reducing Response Bias Through Social Proofing in Rural India

- Collaborated with researchers at University of Washington to deploy behavioral experiments—online (Amazon Mechanical Turk) and on the field (rural India)—to measure the effect of social proofing on target populations.
- Empirically demonstrated that social proofing is a low-cost effective technique for reducing participants’ response bias when researchers solicit honest feedback from participants [in submission].

Curbing Smartphone Digital Consumption through Negative Reinforcement

- Designed, prototyped and built smartphone app that monitors any mobile app usage and persuades users to reduce digital consumption through phone vibration as negative reinforcement.
- Deployed two controlled experiments with 68 participants in India and 150 participants in USA to reveal that negative reinforcement reduces Facebook app usage by 23% per day [in submission].

Prototyping and Building a Behavioral Experiment Platform for Smartphone Field Studies

- Design and implement platform for behavioral scientists to run field experiments that monitor observable behaviors using smartphone sensors and dynamic interventions in real-time.
- Partner with research institutions (University of Michigan, Ohio State, Technion Institute of Technology) as clients that use this research platform to deploy behavioral studies on student stress level and productivity.

PAST RESEARCH

Cross-Platform Digital Tracking using VPN Architecture

2015 - 2016

- Co-designed and co-developed VPN architecture for monitoring social media usage across digital devices.
- Conducted feasibility study to show the efficacy of VPN monitoring tool [Technical report].

Calendars are for Grown Ups: on time management coaching tool for college students

2015 - 2016

- Performed three-week semi-structured interviews to reveal time management habits of college students.
- Designed time management coaching tool that integrates mobile location traces as a layer for accountability during student-coach interactions [in submission].

Measuring the Effects of Deadlines and Incentives on Study Habits

2014 - 2015

- Collaborated with researchers at Technion Institute of Technology to design a behavioral experiment that measures the effect of daily rewards and imposed deadlines on students studying for GMAT.
- Designed, prototyped and developed iOS app for monitoring participants study habits over two months.

Carnegie Mellon University, Electrical and Computer Engineering Department

Pittsburgh, PA

Research Assistant

05/13 – 08/13

- Performed extensive literature review on Area Coverage and Network Bridging algorithms for disaster aid.
- Collaborated with team of five to develop software for multi-sensor quadcopters helping during disasters.

Vanderbilt University, School of Engineering

Nashville, TN

Gamification Research Assistant

01/13 – 05/13

- Developed web based game to drive research engagement on user touch interaction with mobile phones.
- Demonstrated working prototype for researchers to seamlessly integrate into other research projects.

INDUSTRY EXPERIENCE

IBM Research, Almaden

San Jose, CA

Research Assistant

05/15 – 08/15

- Built and implemented backend DB2 database for travel application together with frontend iOS app.
- Integrated RESTful API for 3rd party developers to interact with travel application.

Google Inc. – Engineering Department (SPQO)

Mountain View, CA

Abuse-Analyst (Database) Intern

06/12 – 08/12

- Performed data analyses to discover trends in the use of Google Plus hosting about 250 million users.
- Implemented project recommendations which will improve the efficiency of Abuse Analysts by 20%.

Johnson and Johnson Inc. – Global Problem Management (ITS Division)

Raritan, NJ

IT Intern

06/11-08/11

- Designed SharePoint websites to market the work process of Global Problem Management department.
- Analyzed about 200 global incidents every month with ITIL framework resolving root causes of problems.

TEACHING EXPERIENCE

- Technical mentoring for two master's students developing mobile app and web app (Fall 2017).
- HCI & Design, Head Teaching Assistant (Spring 2017).
- HCI mentoring for master's students -- prototyping, designing surveys, and interviewing (Spring 2016).
- Computer Science Tutor, Engineering School, Vanderbilt University (01/12-05/14).
- Math Tutor, LEAD Program, Fisk University (01/10-05/2012).

SKILLS

HCI: prototyping, interviewing, contextual inquiry, survey design, qualitative, quantitative analysis.

Software: web programming, android, iOS, ionic, angular, python, java, jupyter, R.

Behavioral Science: nudge theory, incentive mechanisms and peer-coaching with motivational interviewing.