Sophie Searcy

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SUMMARY

Experienced, versatile full-stack developer, data engineer, and manager. Experience: Python (5yrs), R (3yrs), C (3 yrs), MATLAB (4yrs); Modern ML including Deep Neural Nets.

EXPERIENCE

2016-2017   **ELEKTRA** (elektra.tech)   NEW YORK, NY
Cofounder, CTO
Building the iPhone for haptics. Wearables start-up. Fabrics that pair electrical stimulation to apps. Verticals include accessibility, entertainment, communication, healthcare, VR, gaming, & military. Fundraising: 20k convertible note (1.5M cap, 20% discount). Competitions: The Bridge (Coca Cola's Accelerator) finalist (ranked 22/200). AlphaLab Gear National Hardware Cup semi-finalist. Vogt Awards finalist (25k non-dilutive funding). XlerateHealth finalist. Bucks for Bright Ideas winner ($500 award, 10 hours consultation).
Proof of concept. Design and build proof of concept. Validate underlying technology, collect data on 100+ customer experiences in target audience and demonstrate product-market fit.
Scalable design. Lead engineering teams managing user data and designing a product at 10k/yr volume: electronics hardware, firmware, desktop app.
Human resources. Manage HR. Design collaborative, version controlled, company Handbook.

2012-2016   **COGNITIVE AND DATA SCIENCE LAB** (shaftolab.com)   NEWARK, NJ
Research Assistant, PhD Candidate
Project manager. Manage a data science team developing FOSS tools for replicable cross-platform video data processing in the age of Big Data.
Web experiments. Design full-stack web apps for large-n (~1,000 Ss) behavioral experiments and administer through Amazon Mechanical Turk. Mentor data scientists in full-stack design
Interdisciplinary research on learning Published author on the foundations of learning and computational tractability of learning algorithms. Experience with modern machine learning techniques and mathematics.
Communication. Present work in journals and conferences. Manage lead author responsibilities on manuscripts, conference papers, and presentations.

2008-2010   **GENERAL ELECTRIC APPLIANCES**   LOUISVILLE, KY
Engineering Co-op
Energy use research Design an experiment for comparing energy use between technologies (ZigBee and Wifi), gather data that will lead to publication.
Circuit design and validation Design and test circuits for serial communication and DC-DC power supplies.

PUBLICATIONS

Searcy, W.K. Vong, Lane & Shafto (In prep). Cause and affect: Subjectively rational causal inference about affective content.
Searcy (In Prep) Levels of expressivity: learning across incompatible representational levels
Searcy & Shafto (2016). Cooperative Inference: Features, objects, and collections. Psychological Review. PDF
Searcy & Shafto (2014). Learning biases for teaching boolean concepts. Proceedings of the 36th annual conference of the Cognitive Science Society. PDF
Energy Efficiency Comparisons of Wireless Communication Technology Options for Smart Grid Enabled Devices (2010)

EDUCATION

MENG   **UNIVERSITY OF LOUISVILLE**
Electrical and Computer Engineering
University Fellowship Award (2 years Full tuition plus stipend)
MS   **UNIVERSITY OF LOUISVILLE**
Experimental Psychology: Computational Cognitive Science
BS   **UNIVERSITY OF LOUISVILLE**
Electrical and Computer Engineering
National Merit Scholarship (5 years full tuition plus stipend)

PERSONAL

Marathon runner and Boston Qualifier. Brazilian Jiu Jitsu. Part of maker community in Louisville, KY and Brooklyn.