YURI ZAITSEV

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EDUCATION

Stanford University Stanford, CA
expected May 2019
M.S. Mechanical Engineering
Design Impact – Sustainability / Healthcare

Northeastern University Boston, MA
May 2013
B.S. Mechanical Engineering *cum laude*
Minor in Physics

SKILLS

Technical
Design Thinking, Ethnographic Interviewing, Concept Design, Educational Workshop Development, Technical Writing

Fabrication
SLA, FDM, DLP, SLS(M), EBM 3D Printing, Silicone/Metal Casting, Machine/Wood Shop Tools, Microfab, Electronics Design

Software
Python: TensorFlow, Keras, Scikit Learn, MATLAB, R, Solidworks, ProE, Blender, Adobe Suite, MS Office, Materialize Magics

PROJECTS

Burn-Out Among Disaster First Responders
Studying the change in efficacy and compassion of first responders, while they work in high stress situations for a prolonged time.

Reframing Commuting
Developed framework to target fatigue among car commuters and presented research and design directives to Faurecia. Framework was based on interviews, biometric data, and prototyping.

Design Thinking Bootcamp
Created curriculum and ran workshop event for industry professionals (sold out). Workshop focused on teaching ethnographic interviewing, framework development, and quick iterative prototyping.

NOTE

US Citizen
Fluent in English and Russian. Conversational Spanish.

PROFESSIONAL EXPERIENCE

Senior Research Engineer Stryker Orthopaedics
Jan 2014 – Jun 2017 Mahwah, NJ

- Collaborated with surgeons, marketing, and product development to design novel orthopedic implants, and was lead of new joint replacement concept development.
- Gained FDA 510(k) clearance for 4 implants.
- Presented findings, and best practices to FDA, surgeons, and developing manufacturing facilities abroad.
- Developed laser additive manufacturing technology for titanium alloys to create solid, porous, and linked structures for use in orthopedic applications. [1]

Visiting Researcher Northeastern University
May 2013 – Jul 2014 Boston, MA

- Designed tactile display to aid visually impaired individuals, which assists in discerning facial patterns of during social interactions. [2]
- Performed user testing, iterative prototyping, and predictive finite element analysis on designs to ensure prototype longevity and success.
- Created complex microscale structures using microfab, 3D printing, and molding.

Mech. Engineer Co-Op Philips Color Kinetics
Jul 2012– Dec 2012 Boston, MA

- Drafted and designed LED products used most notably in the mast of the Empire State Building and the outward facing walls of the Freedom Tower in NYC.
- Designed and built smart light fixtures for Design Museum Boston's "Street Seat Design" exhibit, which included an added layer of interaction with the public and provided exhibit information for every featured designer.
- Performed beta and alpha testing on unreleased products to ensure compliance to standards and product success.

PUBLISHED WORK

[1] Patent EP3181273A1 "Porous structure produced by additive layer manufacturing"

[2] Xie, X., **Zaitsev, Y.**, Teller, S.J. and Livermore, C., 2014, "Scalable, MEMS-enabled, vibrational tactile actuators for high resolution tactile displays," Journal of Micromechanics and Microengineering, 24(12), p.125014.