Aaron Lichtner, Ph.D.

Data Scientist

Seattle, WA | 818.521.4283 | email: aaron@aaronlichtner.com | web: aaronlichtner.com | github: /alichtner

SUMMARY

Data scientist with extensive experience in experimental methods, data visualization, teaching and technical communication.

SKILLS

Programming and Statistics
Python: numpy, pandas, scipy
R: dplyr, tidyr
Time Series, A/B Testing

Computer
Bash, Git, LaTeX, HTML, CSS, Adobe Suite, ImageJ, AWS

Machine Learning
Natural Language Processing, Recommender Systems, Logistic Regression, Supervised and Unsupervised Learning

Database
SQL-MySQL, Postgres

Data Visualization
ggplot2, ggmap, base-R, seaborn, bokeh, leaflet, shiny, matplotlib,

Technical Skills
3D Printing, Parametric Modelling, Spectroscopy, Image analysis, FEM, DEM, Experimental Design

EXPERIENCE

Data Science Fellow | Galvanize | Seattle, WA | 2016
- Participating in an intensive 12-week, projects-based course covering state-of-the art machine learning topics, statistics, Python, SQL, and Big Data

Chief Design Officer | JumpStart[CSR] | Seattle, WA | 2015 - 2016
- Designed and manufactured 3D-printed insoles using data from embedded piezoelectric sensors
- Built the prototype UX/UI for our web-app and dataviz applications
- Conceived, documented and illustrated the process for automating custom orthotic design and manufacturing *(US 15/055,961)* and how to automate the process for designing custom wearables *(US 15/056,076)*

Technical Editor | EWorldEditing | Eugene, OR | 2014 - 2015
- Edited the grammar and style of technical papers from foreign researchers for publication in English-speaking scholarly journals

Graduate Student Researcher | U. of Washington | Seattle, WA + Grenoble, France | 2010 - 2015
- Collaborated with an international team to develop an integrated experimental/simulation approach to studying multifunctional, porous ceramics using freeze-casting and discrete-element modelling (DEM)
- Pioneered methods to simultaneously suspend dissimilar ceramic particles in an aqueous environment capable of freeze-casting
- Published 11 papers (3 first author) with 35+ citations in scientific literature

Biomedical R&D Intern | TDC Medical | Sunnyvale, CA | 2008
- Assisted in the prototyping of an ultrasonic cardiac catheter

TEACHING EXPERIENCE

Academic Coach | Hampton Tutors | Seattle, WA | 2016
- Taught one-on-one sessions to students, grades 6 - 12, in math, english, french and science
- Aided students with executive function, organizational strategies, study systems,, exam prep strategies, goal setting and tracking, focus and time management skills

Study Skills Instructor | Math Science Upward Bound | Seattle, WA | 2015
- Led sessions in Science, Technology, Engineering and Math (STEM) for local high school students in the Seattle Area
- Developed and implemented curriculum in neuroscience, computer science, probability and chemistry that supplemented student skills

Graduate Teaching Assistant | University of Washington | Seattle, WA | 2010 - 2011
- Instructed students in the theory and procedures used in x-ray diffraction, mechanical testing, rheological testing, scanning-electron microscopy, confocal imaging and other engineering techniques
- Taught proper laboratory notebook maintenance and technical report composition

EDUCATION _____

University of Washington, Seattle, WA
- Ph.D. Materials Science and Engineering | 2015
- Master's Materials Science and Engineering | 2013

California Polytechnic State University, San Luis Obispo, CA
- B.S. Materials Engineering | 2009

AWARDS _____

- **Galvanize Foundation Diversity Scholarship** | 2016
- **Teaching Assistant of the Year** | University of Washington | 2011
    - Materials Science and Engineering Department
- **Delimitros Fellowship** | University of Washington, 2010

PROJECTS _____

3D Printed City | U District Square | 2016
- Designed, built, and manufactured a scale model of the University District in Seattle to be displayed in Bulldog Espresso and used as a neighborhood advocacy tool

Pronto Cycleshare Infographic | 2016
- Created an infographic using R and Illustrator showing various facts about Seattle's bikeshare program as part of the Pronto Data Challenge.
    - Dataviz at: github.com/alichtner/ProntoDataViz

Retail Pot in King County | Washington Poison Center | 2015
- Used R, leaflet and a shiny framework to build an interactive applet showing call-center data taken from the poison center to show where marijuana-related calls were generated in conjunction with openings of retail-pot stores in King County.
    - Tool hosted at: alichtner.shinyapps.io/map-app/

Crime Visualization Tool | U District Square | 2015
- Built a data visualization tool for a local non-profit so they could visualize SPD 911 calls as a function of time, location, and crime-type
    - Tool hosted at: alichtner.shinyapps.io/crime-app/