Samantha (Steiner) High, Ph.D.

Software Engineer and Scientist | Ph.D. in Biology

Portland Metro Area

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Experienced, innovative, talented, and focused Software Engineer and Scientist with deep passion for solving problems, knows how to find answers, learn new skills, and quickly adapt to changing environments. Skilled in object-oriented and procedural programming languages, data structures, algorithms, databases, SDLC, Agile Methodologies, TDD, GitHub CI/CD, integrated development environments, web development, text editors, git version control, experimental design, complex data analysis, presenting results, providing leadership and establishing technical guidelines. Considered a valuable team asset. Delivers high quality work, meets tight deadlines, and enjoys new challenges.

BUSINESS SKILLS

Published Author
Experienced Presenter
Grant Writer
Agile Methodologies
Atlassian Jira
Microsoft suite

LANGUAGES & FRAMEWORKS

Python (NumPy, Pandas)
JavaScript (React, NodeJS)
HTML, CSS
C, C++ (OpenMP, OpenCL, CUDA)
x86 Assembly
R
Elixir

TOOLS

Git, GitHub
PyCharm
Visual Studio
Vim
LaTeX
SPSS

DATABASE

MongoDB
MariaDB
MySQL

OPERATIONS

Linux
GitHub CI/CD
Google Cloud
Grafana Cloud
Cloudflare
Kubernetes

EDUCATION

In progress	**Bachelor of Science in Computer Science,** *Oregon State University* Anticipated completion 2023
2019	**Intro to Programming Nanodegree,** *Udacity*
2016	**Doctor of Philosophy in Biology,** *University of Oregon* Thesis: Sex Determination in Zebrafish: Genetics of Sex and WNT4A
2009	**Bachelor of Science in Biology,** *Oregon State University* Minors: Chemistry, Psychology Thesis: Numerical Effects on Timing System Pathways

PROFESSIONAL EXPERIENCE

10/22-Present	**Owner and Administrator,** *Portlandish Mastodon Server* Administrates and operates infrastructure, moderates users, troubleshoots issues in Cloudflare and Google Cloud, utilizes Grafana Cloud to identify issues with infrastructure.
08/16-Present	**Gap Explanation:** Gained communication skills through connecting with people of different cultures and languages while traveling worldwide. Gained non-profit experience while working as a hospital associate at the Cat Adoption Team. Presently, continuing my education with a post baccalaureate in computer science at Oregon State University while gaining software engineering experience.
06/10-08/16	**Doctoral Researcher,** *University of Oregon Research Faculty* Designed experiments, performed statistical analysis of complex experimental data and genome analysis in R (specifically G-test of genotypes) while working with our bioinformatician, wrote my dissertation and papers, presented at meetings and conferences, and collaborated with researchers. Mentored one to three undergraduate researchers weekly by teaching SOPs and verifying results.
09/10-06/11	**Graduate Teaching Fellow,** *University of Oregon Dept. of Biology* Taught the laboratory section of BI 211: General Biology I: Cells, the laboratory section of BI 212: General Biology II: Organisms, and the discussion section of BI 122: Human Genetics.
06/08-06/09	**Research Assistant,** *Oregon State University Plant Clinic and Dept. of Botany and Plant Pathology* Performed microbiology experiments. Performed data entry, data analysis, and statistical analysis in Excel. Mentored three assistants weekly by teaching them SOPs and verifying experimental results.
06/07-09/07	**Data Analyst,** *Oregon State University Endophyte Service Laboratory and College of Agricultural Sciences* Performed analytical chemistry experiments, chromatography analysis, data entry, data analysis, and statistical analysis.
05/06-06/07	**Research Assistant,** *Oregon State University Dept. of Crop and Soil Science* Performed molecular biology experiments. Performed data entry, data analysis, and statistical analysis in Excel. Mentored one assistant bi-weekly by teaching them SOPs and verifying experimental results.

GRANTS

2015-2016 Developmental Training Grant (T32HD007348)

PUBLICATIONS

Michelle Kossack, **Samantha High**, Rachel Hopton, Yi-lin Yan, John Postlethwait, Bruce Draper. (2019) Female sex development and reproductive duct formation depend on Wnt4a in zebrafish. Genetics. 211(1): 219-233.

Yi-Lin Yan, Thomas Desvignes, Ruth Bremiller, Catherine Wilson, Danielle Dillon, **Samantha High**, Bruce Draper, Charles Loren Buck, John Postlethwait. (2017) Gonadal soma controls ovarian follicle proliferation through Gsdf in zebrafish. Dev. Dyn., 246: 925-945.

Samantha High. June 2016. Sex Determination in Zebrafish: Genetics of Sex and *wnt4a*. Dissertation, University of Oregon.

Wilson C, **High SK**, McCluskey BM, Amores A, Yan YL, Titus TA, Anderson JL, Batzel P, Carvan MJ 3rd, Schartl M., Postlethwait J. (2014) Wild sex in zebrafish: loss of the natural sex determinant in domesticated strains. Genetics. 198(3): 1291-1308.

Samantha Steiner. 2009. Numerical Effects on Timing System Pathways. Thesis, Oregon State University.

PRESENTATIONS AND POSTERS

Samantha High, Yilin Yan, Ruth BreMiller, John Postlethwait. February 2016. Wnt4a is Necessary for the Development of the Ovary and Male Reproductive Duct in Zebrafish. Poster at Graduate Recruitment Weekend, University of Oregon.

Samantha High. November 2015. Wnt4a is necessary for the development of the ovary and male reproductive duct. Presentation at Student Research Report Seminar, University of Oregon.

Samantha High. November 2015. Lasting effects of early exposure to temperature on the gonadal transcriptome at the time of sex differentiation in the European sea bass, a fish with mixed genetic and environmental sex determination. Presentation at Developmental Biology Journal Club, University of Oregon.

Samantha High. May 2015. UPF2, a nonsense-mediated mRNA decay factor, is required for prepubertal Sertoli cell development and male fertility by ensuring fidelity of the transcriptome. Presentation at Developmental Biology Journal Club, University of Oregon.

Samantha High. April 2015. Wnt4a is necessary for the development of the ovary and male reproductive duct. Presentation at Zebrafish Groupie, University of Oregon.

Samantha High, Yilin Yan, Ruth BreMiller, John Postlethwait. February 2015. Female zebrafish sex development depends on Wnt4a activity. Poster at Graduate Recruitment Weekend, University of Oregon.

Samantha High. November 2014. Wnt4a is necessary for the development of the ovary and male reproductive duct. Presentation at Student Research Report Seminar, University of Oregon.

Samantha High. July 2014. Sex Determination in Zebrafish. Presentation at Zebrafish Groupie, University of Oregon.

Samantha High. February 2014. Meiotic chromosome structures constrain and respond to designation of crossover sites. Presentation at Developmental Biology Journal Club, University of Oregon.

Samantha High, Yilin Yan, Ruth BreMiller, John Postlethwait. February 2014. What is the Role of Wnt Signaling in Zebrafish Gonad Development? Poster at Graduate Recruitment Weekend, University of Oregon.

Samantha High. July 2013. Searching for Sex Associated Loci in Zebrafish. Presentation at Zebrafish Groupie, University of Oregon.

Samantha Steiner, Yilin Yan, Ruth BreMiller, Adriana Rodriguez Mari, John Postlethwait. February 2013. Zebrafish Fell off the See-Saw. Poster at Graduate Recruitment Weekend, University of Oregon.

Samantha Steiner. February 2013 Convergent Evolution Associated with Habitat Decouples Phenotype from Phylogeny in a Clade of Lizards.Presentation at EvoDevo Journal Club, University of Oregon.

Samantha Steiner. October 2012. Does the See-Saw Hypothesis Apply to Zebrafish Sex Determination? Presentation at Zebrafish Groupie, University of Oregon.

Samantha Steiner. April 2012. Nutritional Control of Reproductive Status in Honeybees via DNA Methylation. Presentation at EvoDevo Journal Club, University of Oregon.

Samantha Steiner, Yilin Yan, Ruth BreMiller, Adriana Rodriguez Mari, John Postlethwait. February 2012. Sex Determination in Zebrafish: Expression Analysis of Candidate Genes. Poster at Graduate Recruitment Weekend, University of Oregon.