

Lee Falin

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Education

- PhD Genetics, Bioinformatics, and Computational Biology, Virginia Tech - 2011
- BS Computer Science, University of Illinois Springfield - 2008

Academic Appointments

- Faculty of Computer Science BYU-Idaho: 2020 – 2021
- Assistant Professor of Computer Science Southern Virginia University: 2017 – 2018
- Visiting Faculty of Computer Science BYU-Idaho: 2015 – 2017
- CS/EE Adjunct BYU-Idaho: 2014 – 2015
- Bioinformatician EMBL–European Bioinformatics Institute: 2012 – 2014
- Research Assistant, Tyler Lab Virginia Bioinformatics Institute: 2006 – 2011

Publications

Ensembl Genomes 2016: more genomes, more complexity.

Kersey, Paul; et al. - Nucl. Acids Res. (04 January 2016)

Ensembl Genomes 2013: Scaling up access to genome-wide data.

Kersey, Paul; et al. - Nucl. Acids Res. (1 January 2014)

Using Interpolation to Estimate System Uncertainty in Gene Expression Experiments.

Falin LJ, Tyler BM (2011) - PLoS ONE 6(7): e22071.

University Citizenship / Outreach

- Digital Literacy Committee - SVU
- Course Design Council - BYU-Idaho
- AI Faculty Mentor - BYU-Idaho
- Host of the Everyday Einstein Science Education Podcast for Macmillan Books

Courses Taught

- Machine Learning
- Software Design and Development
- Procedural Programming in C++
- Object-Oriented Programming in C++
- Data Structures & Algorithms in C++
- Introductory Programming in Python
- Introductory Programming in Java
- Database Systems with PostgreSQL
- Theory of Computation
- Game Design
- Client-Side Web Development
- Server-Side Web Development

Languages

- English - Native Proficiency
- Brazilian Portuguese - Professional working proficiency

Conference Presentations / Posters

Adapting Teaching to the Needs of the Learner

Virginia Tech Hokie Stone Commemoration – 2010

System Uncertainty in Gene Expression Data

Virginia Tech Graduate Research Symposium – 2010

Microarray Data Inference

ACC Interdisciplinary Forum for Discovery in the Life Sciences – 2010

Microarray Data Inference

ISCB Intelligent Systems for Molecular Biology – 2010

OpenCL – Now everyone has a super computer (almost)

Virginia Bioinformatics Institute – 2009

Inference of Functional Modules in Regulatory Networks

Virginia Bioinformatics Institute – 2007

Volunteer Experience

- Missionary for The Church of Jesus Christ of Latter Day Saints - 1996 - 1998
- Scoutmaster for The Boy Scouts of America - 2009 - 2012

Selected Industry Experience

Software Engineer / Web Developer at Rogue Amoeba 2018 - 2019, 2020 - Present

I'm currently working on a remote, asynchronous team as a web developer and mac software engineer on a variety of commercial software projects for macOS, iOS, and Android using Objective-C, Swift, Python, and Java.

I also develop and maintain a variety of public web applications and internal tools using Vanilla JavaScript, Vue.js, Babel, Webpack, AWS, PHP, and Python.

Light and Lore - Data Science Consultant May 2017 - Present

Worked with clients using the CRISP-DM process model to develop custom Machine Learning and Data Engineering pipelines to help them solve data analysis, visualization, and other machine learning problems.

Technologies used include pandas, NumPy, Matplotlib, scikit-learn, TensorFlow, Keras, and Shapley.

Software Engineer at Rogue Amoeba 2008 - 2016

I worked at Rogue Amoeba in various capacities (full-time, part-time, contractor) from 2008 to 2016, depending on what was happening with my academic career.

During that time, I worked on various of commercial audio software on a variety of platforms including Windows, Linux, iOS, Android, and Raspberry Pi. The technology stack varied based on platform, but included C++, C#.NET, Java, Objective-C, and Python.

Bioinformatician at EMBL-EBI 2012 - 2014

I worked with a team of international collaborators on the Microme and Ensembl Genomes projects to develop and deploy novel data science algorithms on large scale genomic and metabolomic datasets.

The main technology stack included Oracle, Perl, Python, Platform LSF, and Java. I also used a fair amount of MySQL, MongoDB, Neo4J, HTML, CSS and JavaScript.

Owner and Software Engineer 2005 - 2008

Polarian was a company I started as an undergraduate student. Polarian's main product was Screen Mimic, a screen recording application designed for macOS, built using Objective-C and OpenGL. It had support for QuickTime, Flash, and Flash Video formats.

In 2008 Polarian was acquired by Decimus software.

Senior Software Engineer at Cat Communications Inc. 2001 - 2005

At CCI, I developed a variety of software to integrate sales, marketing, and 3rd party order provisioning systems. Most of the software was written using Microsoft's .NET stack, including: MS SQL Server, Microsoft BizTalk Server, and C# .NET.