

# Adam Conn

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## Summary:

- 1.5 years as research assistant in Computational Biology Laboratory at the Salk Institute.
- 2.5 years of DNA, RNA, protein, and cell culture experience in industry.
- Published author with recent papers in *Current Biology* and *Cell Systems*.
- 2 years managerial experience for a Starbucks licensed store.
- Prior teaching experience in a program focused on Biotechnology Instrumentation.
- B.S. Degree in Bioengineering with focus on Bioinformatics at UCSD.

## Skills:

- **Programming Languages:** Python, Java, C++, javascript, HTML, CSS.
- **Biological Applications:** His-tag purification, ion-exchange chromatography, size-exclusion chromatography, DNA isolation, restriction digest, transformations, transfections, PCR, insect/ bacterial cell fermentations,
- **NGS applications:** Solid understandings of sequence by synthesis and downstream applications such as De Novo assembly, whole-genome sequencing, RNA-seq, ChIP-seq, single/paired end sequencing, as well as current challenges of short-read sequencing.
- **Software:** Object Oriented Programming, familiarity with MVC and other design patterns, familiarity with Agile.
- **Bioinformatic Algorithms:** Burrows-wheeler alignment, global/ local alignment, genome assembly with de Bruijn graphs, and gene prediction with HMM's.
- **Machine Learning Algorithms:** linear regression, logistic regression, SVM's, decision trees, random forests, and Bayesian analysis.
- **Other:** Linear algebra, probability, unit testing, linux/ windows, REST, Django, and MySQL.

## Publications:

- A. Conn, U.V. Pedmale, J. Chory, C.F. Stevens, S. Navlakha. "A Statistical Description of Plant Shoot Architecture". *Current Biology*: 27(14) pg 2078-2088e3, July 6, 2017. DOI:<http://dx.doi.org/10.1016/j.cub.2017.06.009>.
- A. Conn, U.V. Pedmale, J. Chory, S. Navlakha. "High-Resolution Laser Scanning Reveals Plant Architectures that Reflect Universal Network Design Principles" *Cell Systems*: 5(1) pg 53-62, July 26, 2017. DOI: <http://dx.doi.org/10.1016/j.cels.2017.06.017>

## Education:

UC San Diego *B.S. Degree in Bioengineering: Bioinformatics (3.4 GPA) 2015*



*A.A. Degree in Physics (3.9 GPA) 2012*

## Work Experience:



*Research Assistant: October 2015- current*

- Built an automated pipeline to analyze RNA-Seq data from a sample of healthy patients of varying age in order to use the expression data to predict the age of an individual based off expression profile.
- Designed and implemented statistical models to describe plant architecture, and the plasticity of the architecture when exposed to different growing conditions using high-precision laser scanning.
- Use of many data visualizations tools. Primarily matplotlib but also some javascript frameworks and google maps API.
- Give presentations, collaborate with other scientists, and communicate our research to both other scientist as well as the public.



*Research Associate: December 2009-May 2012*

- Directly responsible for purifying native and recombinant proteins.
- Routinely worked with multiple cell lines (bacteria/ insect) to maintain, transform/ transfect, ferment and harvest cells.
- Created novel cDNA libraries.
- Meticulous and detailed documentation.
- Performed a wide variety of assays including PCR, RT-PCR, SDS-PAGE, western blots, DNA-agarose gel electrophoresis, nickel/ion-exchange/size exclusion chromatography, cell toxicology and enzyme kinetic assays



*Starbucks License Store Manager: May 5, 2007-January 2010*

- Managed a small team of ~5 employees to design and execute world class customer satisfaction.
- Met sales goals, and ordered products and tracked inventory through POS system.