CEDAR WARMAN

COMPUTATIONAL BIOLOGIST | PLANT PHENOTYPING | GENOMICS
WWW.CEDARWARMAN.COM

SUMMARY

I am a computational biologist and data scientist with 8+ years of research experience. I specialize in building new phenotyping systems and genomic data analysis pipelines to study unsolved biological problems.

SKILLS

- Genomics (RNAseq, Salmon, STAR, DESeq2, GATK, R)
- Phenomics (custom hardware, Raspberry Pi, embedded sensors, R Shiny web apps)
- Computer vision (Python, TensorFlow, OpenCV, Labelbox API)
- Pipelines (Nextflow)
- HPC and cloud-native computing (Slurm, Singularity, Docker)

CONTACT

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SELECTED EXPERIENCE

RESEARCH SCIENTIST • UNIVERSITY OF ARIZONA
08/20 – PRESENT

- Study plant responses to heat stress using high-throughput phenotyping and genomic approaches
- Create and run computer vision and RNAseq pipelines
- Manage team of 5 student researchers to collect and analyze phenomic data on a large scale
- Build embedded sensors to monitor experimental conditions with custom R Shiny web apps
- Awarded $216,000 National Science Foundation Postdoctoral Fellowship for research project

RESEARCHER • OREGON STATE UNIVERSITY
09/15 – 07/20

- Investigated molecular mechanisms of plant reproduction using combination of wet-lab and bioinformatics techniques
- Built novel maize phenotyping system and computer vision pipeline patented by Oregon State University
- Increased lab's phenotyping throughput by 10x over previous methods
- Published 5 peer-reviewed research papers and presented work at 8 conference talks

RESEARCH TECHNICIAN • OREGON STATE UNIVERSITY
03/14 – 06/15

- Studied metabolic engineering in rice, potatoes, and plant model systems using wet-lab techniques
- Led molecular cloning project to characterize thiamine metabolic pathways, leading to peer-reviewed paper
- Performed molecular plant disease diagnostics to support major agricultural operations

EDUCATION

PHD BOTANY • 2020 • OREGON STATE UNIVERSITY

BS BIOLOGY/ENGLISH • 2010 • BOSTON COLLEGE