zaking17@gmail.com Cell: (517) 320-0932

Zachary A. King

- Experienced technology leader: Built and maintained software applications in biotech & health tech, as a full stack dev and as team lead; strategy development & execution; budgeting; team building; identifying and filling organizational gaps
- Broad technical expertise: Software engineering, data science, synthetic biology, metabolic engineering, compliance (SOC2, HIPAA), consumer app development, data engineering, cloud infrastructure
- Experience as an researcher and principal investigator, 30+ publications and 5000+ citations in metabolic modeling and synthetic biology

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Professional Experience

VP of Engineering - Delfina (May 2022 – present).I lead the Delfina software team, where we are tackling the maternal health crisis through integrated mobile apps (Flutter), data platforms (Postgres/BigQuery), and predictive AI (both proprietary ML and LLM/RAG tools). Our systems integrate deeply with EHRs, connecting providers & pregnant patients. My mission is to develop impactful, user-centered products while fostering a team culture that champions autonomy, creativity, and growth for the team. I still love pitching in and writing code: we work in Dart, Python, Terraform, and Typescript. Find Delfina on iOS and Android.

Associate Director DevOps / Lead DevOps Engineer - Amyris (Nov 2019 – May 2022). Developed the DevOps practice at Amyris, including project management, ticket management, strategy, recruitment, performance measures, and budgets. Aligned DevOps with IT, developers, security, and network teams. Led expansion to support R&D data engineering, data science, and cloud infrastructure (GCP). Managed a Data Warehouse redesign. Contributed to an academic article on Amyris's DARPA grant to engineer 400+ chemical production strains.

Project Scientist, PI – Novo Nordisk Foundation Center for Biosustainability / UCSD (Jan 2017 – Oct 2019). Led a team of researchers and software developers to address the challenges of biological "Big Data" by developing new simulations, visualizations, and knowledge bases. Published five research articles as Principal Investigator.

Graduate Student Researcher - UCSD (Sept 2011 – Dec 2016). PhD advisor Dr. Bernhard Palsson. Dissertation titled "Optimization of microbial cell factories with systems biology".

Technical Skills

- 10+ years' experience: Python, web dev (JS, TS, React, D3), Linux admin, SQL (Postgres, Sqlite), git
- 5+ years' experience: Mobile Dev (Flutter, Objective C/iOS/Xcode), Cloud (GCP, AWS, & Azure), Docker, REST & GraphQL API development, cloud networking, cloud security (SOC2), observability (Datadog, Solarwinds), Terraform, Jupyter
- Training: Certified Scrum Product Owner (2017), AMA 5-Day MBA course (2021)
- Extensive experience in biological modeling, data analysis, and optimization
- Primary software developer of two widely-used open source applications:
  Escher: https://escher.github.io | BiGG Models: http://bigg.ucsd.edu

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Academic Publications

>30 publications, >5000 citations, H-index = 25
https://scholar.google.com/citations?user=ESLgsdUAAAAJ

Awards

2011 Jacobs Fellowship, Jacobs School of Engineering, UCSD
2013 National Science Foundation Graduate Research Fellowship Program (GRFP) Fellow

Education

Ph.D. Bioengineering
Advisor: Prof. Bernhard Palsson

UC, San Diego, La Jolla, CA – 2016
http://systemsbiology.ucsd.edu

B.S.E. Biomedical Engineering

University of Michigan, Ann Arbor, MI — 2011

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