

# Skye Lane Goetz

Biomedical Research Scientist (AI & Data)

+1 (909) 497-9907  
skye.lane.goetz@gmail.com  
skye-lane-goetz  
SkyeAv  
0009-0007-8373-2352

## Work Experience

<b>Institute for Systems Biology (ISB)</b>	<b>Seattle, WA</b>
<i>Research Associate (Data Science) [Hood Lab]</i>	NOV 2024 - PRESENT
○ Placeholder	
<b>Haynes-Zigler Lab (CalPoly)</b>	<b>San Luis Obispo, CA</b>
<i>Student Researcher (Computational Subgroup)</i>	SEP 2024 - NOV 2024
○ Placeholder	
<b>Institute for Systems Biology (ISB)</b>	<b>Seattle, WA</b>
<i>Data Science Intern [Hood Lab]</i>	AUG 2024 - SEP 2024
○ Placeholder	
<b>Institute for Systems Biology (ISB)</b>	<b>Seattle, WA</b>
<i>Summer Intern/Trainee (NSF REU) [Hood-Price Lab]</i>	JUN 2024 - AUG 2024
○ Placeholder	
<b>CalPoly Water-Energy Sustainability Training Team (WESTT)</b>	<b>San Luis Obispo, CA</b>
<i>Student Researcher (PHOS and CRIAS projects)</i>	JAN 2024 - JUN 2024
○ Placeholder	
<b>Compass Group USA</b>	<b>San Luis Obispo, CA</b>
<i>Food Service Worker</i>	JAN 2024 - JUN 2024
○ Placeholder	
<b>General Polymer Solutions (GPS Polymers) LLC</b>	<b>Upland, CA</b>
<i>Customer Fulfillment and Logistics</i>	AUG 2021 - SEP 2023
○ Placeholder	
<b>US Soccer Federation</b>	<b>Upland, CA</b>
<i>US Soccer Grassroots Referee (Grade 8)</i>	JUN 2021 - SEP 2023
○ Placeholder	
<b>Kessen Star Spinners</b>	<b>Upland, CA</b>
<i>Founder, President, and CEO</i>	DEC 2015 - SEP 2016
○ Placeholder	

## Skills

### Technical Skills

- **Languages:** Python, Elixir, SQL, Shell Scripting, LaTeX, Julia, Nim, Clojure
- **Data Science:** Polars, Spark, Numpy, Matplotlib, Sqlite, Postgres, DuckDB
- **AI/ML:** PyTorch, LightGBM, Scikit-learn, LangChain, Snorkel, Transformers, PEFT, ChromaDB
- **Knowledge Graphs:** Graph Databases, Ontology, KGX, Centrality, Graph Neural Networks
- **NLP:** spaCy, NLTK, Embeddings, Text Classification, TF-IDF
- **DevOps:** Nix, Docker, Setuptools, Mix, Pytest, Kubernetes

### Domain Knowledge

- **Biology:** Heterogenous Multiomic Data, Shotgun Metagenomics, Polygenic Risk Scores, ELISA
- **Chemistry:** DFT, Mass Spectrometry, <sup>1</sup>H NMR, FTIR, Organic Synthesis, Equilibrium
- **Data Science:** PCA, KernelPCA, UMAP, Pearson Correlations, Logistic Regression, Deep Learning, ANOVA
- **Business:** SPIN Selling, Door-To-Door Sales, Product Marketing, Agribusiness, Microeconomics, Macroeconomics

### Additional Competencies

- **Scientific Communication:** Lab Meetings, Conference Presentations, Journal Writing, Funding Proposals
- **Leadership and Collaboration:** Mentoring, Team System Design, Knowledge Graph, Microbiome, and Software Consulting

## Publications

- [1] Skye L. Goetz, Amy K. Glen, and Gwêlyn Glusman. MicrobiomeKG: Bridging Microbiome Research and Host Health Through Knowledge Graphs. *Frontiers in Systems Biology*, 2025.
- [2] Kamararie Fecho, Gwêlyn Glusman, Sergio E. Baranzini, Chris Bizon, Matthew Brush, William Byrd, Lawrence Chung, Andrew Crouse, Eric Deutsch, Michel Dumontier, Aleksandra Foksinska, Jennifer Hadlock, Kaiwen He, Sui Huang, Robert Hubal, Gregory M. Hyde, Sharat Israni, Kelyne Kenmogne, David Koslicki, Jana Dorfman Marcette, Ewy A. Mathe, Abrar Mesbah, Sierra A. T. Moxon, Christopher J. Mungall, John Osborne, Carrie Pasfield, Guangrong Qin, Stephen A. Ramsey, Justin Reese, Jared C. Roach, Reese Rose, Karthik Soman, Andrew I. Su, Casey Ta, Gaurav Vaidya, Rosina Weber, Qi Wei, Mark Williams, Chunlei Wu, Colleen Xu,

Chase Yakaboski, and The Biomedical Data Translator Consortium. Announcing the Biomedical Data Translator: Initial Public Release. *Clinical and Translational Science*, 2025.

- [3] Guangrong Qin, Kamileh Narsinh, Qi Wei, Jared C. Roach, Arpita Joshi, Skye L. Goetz, Sierra T. Moxon, Matthew H. Brush, Colleen Xu, Yao Yao, Amy K. Glen, Evan D. Morris, Alexandra Ralevski, Ryan Roper, Basazin Belhu, Yue Zhang, Ilya Shmulevich, Jennifer Hadlock, and Gwennlyn Glusman. Generating Biomedical Knowledge Graphs from Knowledge Bases, Registries, and Multiomic Data. *bioRxiv*, 2024.

## Education

---

<b>California State Polytechnic University (Cal Poly)</b>	<b>San Luis Obispo, CA</b>
<i>BS Biochemistry</i>	<i>Feb 2024 - Present</i>
○ GPA: 3.626/4.000	
○ Graduation Date: Spring Quarter 2026	
○ Consulted on Machine Learning Senior Projects for Computer Engineering Students	
- Improved AUC by 0.15	
○ Developed and Trained Computational and Machine Learning Techniques for Biochemical Assays in Lab	
- Improved R <sup>2</sup> Coefficients by 0.08 on Average	
○ Trained Modifications to Organic Syntheses in Lab	
- Speed Up Cited Procedure by 30 Minutes	
○ Consulted on Multinomial Classification Efforts in the Bioinformatics Lab	
<b>California State Polytechnic University, San Luis Obispo</b>	<b>San Luis Obispo, CA</b>
<i>BS Agribusiness</i>	<i>SEP 2023 - FEB 2024</i>
○ Completed 5 Months of Coursework Before Transitioning to Biochemistry	
○ Wrote a Comprehensive Report on the Economics of the California Almond Industry for the 2022 Growing Season	
<b>Upland High School</b>	<b>Upland, CA</b>
<i>High School Diploma</i>	<i>AUG 2019 - JUN 2023</i>
○ GPA: 4.000/4.000	
○ High School Soccer 4 Years	
- Team Captain 3 Years	
- Varsity Coaches Award	
- Varsity Most Improved Player Award	
- 2021-2022 Golden Boot	
○ Designed (with CAD) and 3D Printed Ceramic Stamps for the Ceramics Studio	
○ Wrote AP Physics Notes Programs for Class TI84s	

## Talks and Presentations

---

<b>Conference and External</b>	
○ <b>This Time on MultiomicsKG: Edge Scoring!</b> NCATS Biomedical Data Translator Fall Relay (Bethesda, MD)	SEP 2025
<b>Gut Microbiome Signatures of Vegan, Vegetarian, and Omnivore Diets across 21,561 Individuals</b> ISB Micro	AUG 2025
○ Journal Club (Seattle, WA)	
○ <b>Updates on the New MultiomicsKG</b> NCATS Biomedical Data Translator Summer Relay (Bethesda, MD)	JUN 2025
<b>MicrobiomeKG: Extracting Relationships between the Microbiome and Host Health from Published</b>	MAY 2025
○ <b>Supplementary Materials</b> Cal Poly Bailey College Research Symposium (San Luis Obispo, CA)	
<b>MultiomicsKG: Extracting Knowledge Assertions from Tabular Data in Supplementary Materials</b> NCATS	FEB 2025
○ Biomedical Data Translator Spring Relay (Bethesda, MD)	
<b>MicrobiomeKG (v0.1): A Microbiome-Centric Knowledge Graph Facilitating Human Reasoning Across the</b>	JUN 2024
○ <b>Biomedical Domain</b> ISB Summer Research Poster Session (Seattle, WA)	

<b>Group and Lab</b>	
○ <b>This Time on MultiomicsKG: Edge Scores and Agentic Configurators</b> ISB Hood Lab Meeting (Seattle, WA)	AUG 2025
<b>MicrobiomeKG: Connecting the Microbiome and Host Health through Knowledge Graphs</b> ISB	JUL 2025
○ Thorsson-Shmulevich Lab Meeting (Seattle, WA)	
<b>MicrobiomeKG: Connecting the Microbiome and Host Health through Knowledge Graphs</b> ISB Gibbons Lab	JUL 2025
○ Meeting (Seattle, WA)	
○ <b>Tablassert(3.0): Transforming Tabular Data Into Knowledge Graphs</b> ISB Hood Lab Meeting (Seattle, WA)	FEB 2025
○ <b>MicrobiomeKG: Story of My Internship at ISB</b> ISB Hood-Price Lab Meeting (Seattle, WA)	AUG 2024

## Projects

---

<b>Tablassert</b>	<b>Placeholder</b>
<i>Placeholder</i>	<i>Placeholder - Placeholder</i>
○ Placeholder	
<b>MultiomicsKG (and MicrobiomeKG)</b>	<b>Placeholder</b>
<i>Placeholder</i>	<i>Placeholder - Placeholder</i>
○ Placeholder	
<b>Table Config Agent</b>	<b>Placeholder</b>
<i>Placeholder</i>	<i>Placeholder - Placeholder</i>

Placeholder

**Clinical Trials Classifier**

*Placeholder*

Placeholder

**Placeholder**

*Placeholder - Placeholder*