Griffin Thompson

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Leadership Roles

Surgical Robotics Program at Washington University *2025*

> **Spearheading the development** of a groundbreaking surgical robotics program.

> **Integrating AI and robotics** into healthcare, advancing the field of surgical robotics.

> **Creating the first Certificate to PhD program** in surgical and medical robotics in the nation, providing **unparalleled access** for advanced engineers starting in 2025.

President & Founder, Sling Health at Yale, Robotics & Biotech Incubator *June 2023 – Present*

> **Led technical advisory and mentorship** for multiple graduate and undergraduate startup teams focused on robotics and biotech at Yale, offering guidance on advanced technical challenges.

> **Played a key role in the development and optimization** of innovative robotics projects, including AI-driven systems and cutting-edge biotech solutions, helping startups move from concept to prototype.

> **Provided hands-on technical expertise** across a diverse range of projects, from surgical robotics to biomedical devices, ensuring robust design, development, and deployment.

Research & Technical Roles

Soft Robotics AI Lab Researcher, Apollo Lab, Yale *April 2024 – Present*

> **Developed a new diffusion policy system** for action prediction in robotics, employing a **specialized neural network architecture** tailored to bimanual robotic systems.

> **Implemented advanced imitation learning algorithms** within high-fidelity simulated environments to optimize system performance in complex, dynamic scenarios.

> **Conducted rigorous simulations and real-world testing** to validate the robustness and efficiency of the diffusion policy system and neural network models.

Robotic AI Researcher, Grab Lab, Yale *April 2024 – Present*

> **Led advanced enhancements and optimization** of the Physics Simulator DiffSDFSim for **realistic physical interactions**.

> **Extended DiffSDFSim capabilities** for advanced robotic simulations, focusing on realistic physical interactions.

> **Integrated a dynamically enhanced Frank-Wolfe optimization algorithm** for real-time contact resolution and reengineered the LCP solver to improve computational efficiency and accuracy.

Visiting Researcher, Shlien Lab, The Hospital for Sick Children, Toronto *May 2023 – October 2023*

> **Conducted independent research** on sarcomere cancer timepoints.

> **Led the development of ML/AI single-cell sequencing pipelines**.

> **Applied machine learning techniques** to uncover insights from large-scale genomic datasets.

Freelance Work & Writing

Freelance Technical Writing (GriffinTechWrite)   *February 2024 – Present*

> **Freelance technical writer** specializing in AI, robotics, and MedTech documentation.

> **Produced high-quality tutorials, user manuals, API documentation, and white papers**.

> **Demystified complex technologies** through accessible documentation.

Journal on MedTech Advancements   *August 2024 – Present*

> **Created a journal** that explores the latest advancements, financial trends, and the current state of MedTech companies.

> **Covered the intersection** of medical technology, AI, and robotics, with an emphasis on surgical robotics.

> **Developed custom AI analysis tools** to provide the best technical details on stocks, approvals, and trends in the MedTech sphere.

Education

B.A. in Statistics and Data Science, Yale University   *Expected Graduation May 2025*

> **Coursework with an emphasis on Engineering, Robotics, Hardware Development, Machine Learning, and Artificial Intelligence**.

Skills

▸ **Programming Languages:** Python, C++, R, Julia

▸ **Technical Skills:** Robotics, ML/AI, ROS, Advanced Mathematics, CI/CM, Mechanical Engineering, Algorithms

▸ **Documentation Tools:** Sphinx, MkDocs, Doxygen

▸ **Collaboration Platforms:** Jira, Confluence, Slack

▸ **Version Control:** Git, GitHub