

Sasank Desaraju

MD/PhD Candidate • University of Florida

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Education

M.D.–Ph.D. Candidate, University of Florida *Ph.D. 2028, M.D. 2030 (expected)*
Ph.D. in Biomedical Engineering
Advisor: Dr. Benjamin Shickel

M.S. in Biomedical Engineering, University of Florida *2023*
Advisor: Dr. Scott Banks

B.S. in Physics and B.A. in Mathematics, University of Florida *2021*
GD GPA: **4.00** • UG GPA: **3.92** • MCAT: **525** (100th pctl.) • GRE: **166 V / 170 Q**

Honors, Awards, Scholarships

- UF Emerging Research Scholars (ERS) in AI Scholarship
- UF Celebration of Research best predoctoral poster in Data Science and AI 2025

Funding

- NIH F30 (*In Review*)
- UF AI Catalyst Grant \$25,000
- Oberndorf AI Grant \$5,000

Research Experience

Graduate Research Assistant — Shickel Group, UF College of Medicine (IC3 Center) *Spring 2024–Present*

- Research LLM-based AI tools to improve safety and efficiency of clinical care.
- Can LLMs use existing clinical ICU checklists to improve safety in a way that complements existing workflows?
- Develop software on UF's HiPerGator supercomputer.

Graduate Research Assistant - Bihorac Lab, UF College of Medicine (IC3 Center) *Spring 2024–Present*

- Develop deep learning algorithms to predict complications and outcomes of postoperative patients.
- Coordinate team of data scientists, engineers, and clinicians.
- Securely handle patient data from institutional data banks at UF Health.

Graduate Research Assistant — Banks Group, UF College of Biomedical Engineering *Summer 2021–Summer 2023*

- Created next-generation orthopedic diagnostics using artificial intelligence.
- Developed a deep-learning system to predict joint kinematics in native (no-implant) knee joints.
- Implemented a ResNet-based keypoint-estimator neural network in PyTorch Lightning, trained on HiPerGator.
- Collaborated with teams across three countries and multiple departments.

Publications

- Balch JA, Desaraju SS, Nolan VJ, Vellanki D, Buchanan TR, Brinkley LM, Penev Y, Bilgili A, Patel A, Chatham CE, Vanderbilt DM, Uddin R, Bihorac A, Efron P, Loftus TJ, Rahman P, Shickel B. "Language Models for Multilabel Document Classification of Surgical Concepts in Exploratory Laparotomy Operative Notes." *JMIR Medical Informatics*, 2025. doi:10.2196/71176

- Tinga S, Hughes N, Jones SC, Park B, Palm L, **Desaraju SS**, Banks SA, MacArthur SL, Lewis DD. “Stifle kinematics in 4 dogs with cranial cruciate ligament insufficiency treated by CORA-based leveling osteotomy.” *Frontiers in Veterinary Science*, 2022;9:1052327. doi:10.3389/fvets.2022.1052327

Service & Leadership

- **President**, American Physician Scientists Association (APSA) Local Chapter, UF College of Medicine 2024–
Present
- **Website Operations Co-Chair**, American Physician Scientist Association (APSA) 2025–2026
- **President**, Medical Artificial Intelligence Interest Group (MAIIG), UF College of Medicine 2024–2025

Teaching

Co-Lecturer for Graduate Medical Education - UF Anesthesiology and Critical Care *Fall 2026-Present*
- Developed educational resources for biostatistics per US GME board exam preparation - Assists clinical faculty Dr. Meghan Brennan in delivering lectures to UF Shands residents and fellows

Supervised CS Senior Design Group — UF Mechanical Engineering, Banks Lab *Spring 2023*

- Led 9 students across 2 teams to build a more robust codebase for the lab’s AI work.

Supervised CS Senior Design Group — UF Mechanical Engineering, Banks Lab *Spring 2022*

- Led 4 students in a project using AI to generate realistic bone X-ray images.

Graduate Teaching Assistant, Physics 2 (no Calc) Lab — UF Department of Physics *2021*

- Responsible for 80+ students in this online course.

Selected Talks

- **Utilizing Large Language Models to Accelerate Chart-Review Research Projects.** American Physician Scientists Association (APSA), Chicago, IL. *Apr 2025*
- **Autonomous Tracking of Native Canine Stifles.** International Society for Technology in Arthroplasty (ISTA), New York City, NY. *Sep 2023*
- **Segmentation of Enteric Fistulae in Patients with Crohn’s Disease.** Digestive Disease Week (DDW), Chicago, IL. *May 2023*
- **Autonomous, Intraoperative Identification of Biliary Anatomy.** UF College of Medicine Research Day, Gainesville, FL. *Feb 2023*
- **Autonomous Tracking of Native Canine Stifles.** International Society for Technology in Arthroplasty (ISTA), Maui, HI. *Sep 2022*

Hobbies & Interests

- Competitive Rubik’s cube solver (sub-20-second 3×3 average); [WCA competitor profile](#).