

# Shido Nakajima

Plano, TX 75025

nakajima1632@gmail.com  
Personal Website: <https://shidonakajima.com/>

512-825-9581

---

## PROJECTS

### Capstone: Bleeding Control Trainer with Augmented Reality Interface

- Unity and C# oriented AR training interface on a manikin for treating traumatic hemorrhage.
- Project Manager: scheduled and managed project tasks and risks using Gantt chart, Microsoft Project, Work Breakdown Structure, and matrices.
- Programmer: coded AR object behavior using C# and Unity.
- Designer: fabricated a high pressure arterial bleeding asset using pre-built asset and manual designing.

### Parasite Trajectory Analysis using Machine Learning techniques

- MATLAB-based trajectory analysis of parasite positional data via detection of movement groups.
- Convolutional Neural Network image analysis, Decision Tree, and Bagged Decision Tree techniques were used for classification.
- <https://github.com/sNakajima1632/Parasite-Assessment>

### Brain Tumor Detection using Machine Learning

- MATLAB-based, automatic detection of tumor in Brain MRI via image analysis.
- Independent project as a part of the Biomedical Image Processing course.

### Personalized Servers and Accessories

- Installed Ubuntu Server on an old laptop for hosting home entertainment.
- Built Linux and Arduino based accessories such as signal extender and liquid saturation detector.

## Work Experience

### Research Assistant Intern at UT Austin

summer 2018

- More officially: Indicator Displacement Assay Using a Boronic Acid Host and Acid Analyte.
- Under the Practical Molecular Sensors stream of the Accelerated Research Initiative program.
- UV/vis spectrophotometer used to graph/analyze saturation of target substances.
- Mass, volume, and concentration calculation conducted daily to form the substances used.
- Conducted daily check of tools and chemicals, cleaning and adherence to sanitary and safety standards, and communication of methods and results.

### Undergraduate Researcher at UT Dallas

2021- 2023

- Neuronal Networks and Interfaces Laboratory
- Collection and analysis of neural activity in motor cortex of rats.
- Applied filters and manual sorting on collected data to separate units of neuron activity from noise.
- Handled, habituated, anesthetized, and injected rats to observe change in collection of neural activities.
- Assisted in implantation surgery of microelectrode arrays, and brain extraction surgery after rat euthanasia.

## PUBLICATIONS

Jeakle, E. N., et. al. (2023). Chronic stability of local field potentials using amorphous silicon carbide microelectrode arrays implanted in the rat motor cortex. *Micromachines*, 14(3), 680. <https://doi.org/10.3390/mi14030680>

## EDUCATION

Master of Science in Biomedical Engineering  
University of Texas at Dallas, Richardson, TX 2025-

Bachelor of Science in Biomedical Engineering  
University of Texas at Dallas, Richardson, TX 2020-2024  
GPA: 3.772/4.0 Weighted

## SKILLS

Project Management: Microsoft Project, Gantt chart, Work Breakdown Structure  
Laboratory Experience: sterilization techniques, rat habituation, anesthesia, euthanasia, OmniPlex Neural Recording system  
Computer Language: MATLAB, Arduino, bash, LabVIEW, Java, C, Java Script, Linux Terminal, powershell  
Designing: Inventor/Solidworks (3D CAD), Express PCB, NASA Rocket Engine Simulator, Adobe Photoshop, Adobe InDesign, Express SCH  
Finite Element Analysis: FEBio, Meshlab, 3D slicer, MATLAB Gibbon  
Computational Analysis: Convolutional Neural Network, Decision Tree, k-means clustering analysis  
Operating System: Virtual Machines, Windows, Windows Server, Mac OS, Ubuntu, Ubuntu Server, Kali Linux, Metasploitable2, Raspbian  
Fabrication Machines: Soldering, Dremel, 3D Printer, Band Saw, Scroll Saw, Drill, hand tools  
Computer Network: Cisco Packet Tracer, Wireshark, Ekahau Heat Mapper, Nmap  
Violinist: 9 years of study  
Language: English (native) and Japanese (native)

# Shido Nakajima

Plano, TX 75025

nakajima1632@gmail.com  
<https://shidonakajima.com/>

512-825-9581

---

## REFERENCES

### **Luis Martinez, PE**

Owner/Principal Consultant  
LM Martinez Consulting, LLC  
Coppell, TX 75019  
Email: [luis@lmmartinezconsulting.com](mailto:luis@lmmartinezconsulting.com)  
Phone #: 214-537-8591

Mentor for Capstone project from 2023 to 2024.

### **Dr. Gilberto Salazar**

Associate Professor  
The University of Texas Southwestern Medical Center  
5323 Harry Hines Blvd.  
Dallas, TX 75390  
Email: [gilberto.salazar@utsouthwestern.edu](mailto:gilberto.salazar@utsouthwestern.edu)

Client for Capstone project from 2023 to 2024.

### **Dr. Ana Hernandez-Reynoso**

Assistant Professor  
Case Western Reserve University  
10900 Euclid Ave  
Cleveland, OH 44106  
Email: [anaherey@case.edu](mailto:anaherey@case.edu)

Lab supervisor at UT Dallas from 2021 to 2023.