

SKILLS

- **Problem-Solving, Work Independently and In Teams, Excellent writing and communication skills, Asynchronous Programming Concepts, Natural Language Processing, Agile Development Methodologies., intent & entity extraction, understanding of mobile app development principles.**
- **Databases:** Firebase, Realm, MongoDB, mySQL.
- **Operating Systems:** Windows, Linux/UNIX, MacOS, Raspberry Pi, Android, iOS, AWS, Azure.
- **Programming Languages:** Objective-C, C, JAVA, Python, R, Dart, JavaScript, Typescript, HTML, CSS, Kotlin, Swift.
- **Frameworks:** ANGULAR 11, Rails, Bootstrap, Tailwind, Node, Express, React, Vite, Next, Three, Flutter, Flask, MATLAB.
- **IDEs:** VSCode, ArduinoIDE, Android Studio, Sublime, IntelliJ, NetBeans, IBM CPLEX Studio, Overleaf, Figma, Webflow.
- **Data Science Tools:** PyTorch, TensorFlow, NumPy, SVM, XGBoost, MPI, OpenCV, scikit-learn, Pandas, Jupyter.
- **Others:** Git, GitHub, Junit, Excel, NPM, YARN, JSON, BASH, MS Office, Photoshop, Adobe XD, Google Collab, RESTful APIs

WORK EXPERIENCES

Software Developer, *Senior Project* UT Arlington, TX — websites.uta.edu/cseseniordesign/+smart-planter ⓘ Aug 2022 – May 2023

- Designed low power and low latency serverless IoT deployed on **MongoDB** Realm for real-time data optimized by 40%
- Integrated iOS and Android mobile app to notify, visualize and monitor plant's data for automated self-watering feature.
- Documented, blogged, and presented sprints, project poster to sponsor and made project video on *YouTube*.
- Adapted Agile Methodology with **Git, and GitHub** for CI/CD, powered by **Flutter and Objective C**.
- Collaborated, Negotiated & Communicated effectively with sponsor's requirements at *UTA Senior Design Lab* team.

Web Developer, *Research Assistant* UT Arlington, TX — itlab.uta.edu/mln-dive/ ⓘ July 2022 – Dec 2022

- Build dynamic and responsive open-source web *MLN Dashboard for UTA IT-Lab* with schedule team of 5 members
- Integrated seamlessly with research GUI app to perform big data generation, visualization, analyzing, and data minings.
- Built RESTful API for CRUD application, user authentication and administrative management system to monitor system.
- Optimized 20 % performance increased on CI/CD deployment on Nginx Linux/UNIX server for robust web application.
- Powered with **Git, Github, HTML, CSS, JS, NPM, Node, JavaScript, TypeScript, Express, Flask, Python and MongoDB**

Data Scientist, *Research Assistant* UT Arlington, TX — libraries.uta.edu/fcw2023/pedro-maia ⓘ Aug 2021 – Sept 2022

- Developed Shakespeare Character-level Language Model based of *Karpathy's* ⓘ Recurrent Neural Networks Char Model.
- Deep Learning Model was trained on Shakespeare's literature for 2000 iteration with 96 % accuracy.
- Open-Source Project powered by **Google Cloud Collab, Python, NumPy, PyTorch and scikit-learn** libraries and tools.
- Demonstrated academic and research commitment balance showcasing time management & organizational skills.
- Collaborated 2 members, demonstrated flexibility & adaptability on research study at *UTA Park-Mai Collab Lab*.

PERSONAL PROJECTS/OPEN-SOURCE CONTRIBUTION by 🐙 samratbaral

- Flutter/C++ Mobile Developer for **PlantWays** ⓘ App for IoT project which stream & optimize data on iOS and Android.
- Software Engineer/Founder for **SplitPocket** that solves user-friendly design of Spitwise UI and add AI integration for Mobile.
- Web Game Developer for **WebPoker** ⓘ card-game website for 2-5 players to play and enjoy Texas Hold'em Poker online.
- Web Cybersecurity Python Engineer for **Secure** ⓘ a SASS web on stenography, encryption & key, hashing, and password.
- C Developer for **SuperCore** ⓘ is a program that solve existing parallelism problems, compute speedup on HPC stampede.
- React Web Developer for **Portfolio** ⓘ 3D responsive and dynamic website for personal blog, goals and achievements.

LEADERSHIP ROLES AND AWARDS

- **2024 Student Training (SCC)** led by Dr.Rao: 4-HPC-nodes tested **with 4000-watt power** on benchmarks applications.
- **UTA Journal Club Computational Neuroscience** led by Dr.Maia: scikit-learn, Pytorch, Tensorflow, DL, Python.
- **OurCS@DFW23 DCAdmin** led by Dr.Rao: Docker, Distributed Systems, Network, AWS - **Web services**, DRAM/PMem.
- **OurCS@DFW22 AirMon** led by Dr.Li: **IoT**, Arduino, Air sensors, **MATLAB**, ThinkSpeak, Objective C, C, C++.
- **UNT Easy-Med 2022** led by Dr.Mohanty: Smart IoT, **Amazon S3 & RDS**, C, Cybersecurity, AI, **Blockchain**.

EDUCATION

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|---|----------------------------------|-----------------------|-----------|
| • Bachelor of Science in Computer Science | University of Texas at Arlington | Arlington, Texas | May 2024 |
| • Associate of Science in General Science | Brookhaven Community College | Farmers Branch, Texas | July 2019 |