

# Julia Arukakkal

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## EDUCATION

### Texas A&M University

Computer Science- Engineering Honors

GPA: 3.646

Graduation Date: May, 2026

College Station, TX

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## EXPERIENCE

### Teaching Assistant

ENGR 102: Engineering Lab 1 - Computation (Python)

Aug. 2023 – Dec 2023

College Station, TX

- Providing personalized feedback to students on Python programming during lectures & office hours
- Advising students on proper coding practices
- Proctoring & grading exams and quizzes to uphold academic integrity

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## RESEARCH/INTERNSHIPS

### Aggie Research Project – Recombination Maps: the key to better phylogenomics

Aug. 2022 – Present

Team Member

College Station, TX

- Filtered genomic data for more suitable comparison to reference genome
- Assembled genome, analyzed quality (MultiQC, Qualimap), generated recombination rates
- Programming using Bash, SLURM scheduler, Python bioinformatics modules, Parabricks
- Statistical analysis of populations using R
- Presented progress of research topics(read groups, sources of genetic variation) to research faculty weekly

### SEC- Directed Internship

May. 2023 – Aug. 2023

Team Member - Arkysis

College Station, TX

- Determined position of robotic arm relative to space port using fiducials for docking of spacecrafts
- Recognized fiducial using Python OpenCV package and Raspberry Pi camera
- Presented solution pitch, including software development production, timeline and cost, to Arkysis CEO

### AI4All – Discover AI

Aug. 2023 – Nov. 2023

Team Member

College Station, TX

- Created & presented Random Forest Machine Learning model to categorize risk of stroke based on 14 factors
- Checked quality of dataset and of model using heatmaps, learning curves, and confusion matrices

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## SKILLS

Programming Language: Java, Python, C++, R

Developer Tools: IntelliJ, VSCode, PyCharm, Excel, LaTeX

Operating System: Windows & Linux

Proficient in Spanish

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## RELEVANT COURSES

CSCE - Data Structures & Algorithms (C++/Java, in progress), Programming Languages (Scheme/Java, in progress), Computer Organization( C++, in progress), Program Design and Concepts(C++), AP Computer Science A(Java)

MATH - Discrete Structures, Linear Algebra I and II(in progress), AP Statistics

BIOL - Molecular Cell Biology

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## LEADERSHIP

### SWElites

Aug. 2022 – Present

Education Committee Co-counselor(2023-24), Professional Development Committee Member(2022-23)

College Station, TX

- Conducted presentations and resume reviews for helping undergraduate students with job search
- Educated undergraduate members on stress management, habit formation, & basic excel skills

### Delta Kappa Delta Sorority Inc.

Dec. 2022 – Present

Secretary & Tech Lead

College Station, TX

- Managed recruitment timeline, volunteering events, forms, and website
- Regularly volunteered & organized events for children's education and abuse awareness

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## AWARDS

**Fine Arts:** Asian President's Council Poetry Magazine - Pavements, Poetry Society of Texas - 3rd Place Magic of Music Award

**Academic:** Welch Summer Scholars Program, GDIT Scholarship Winner