GEORGE SABAN JR.

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SOFTWARE ENGINEER

SUMMARY OF QUALIFICATIONS

Dedicated and resourceful entry level full-stack software engineer with academic experience in developing applications in multitier architectures. Interested in the field of AI, particularly machine learning and data analytics. Strong interest in data crunching and looking for themes, patterns, and meaning gained from data to discover insights. Excellent team collaboration skills. Passion for learning new technologies.

- Data Analytics, Data Visualization, Power BI, Power Excel, DAX
- AI, Machine Learning, pandas, NumPy
- Python, Node.js, Java, PHP, HTML, CSS, JavaScript, C#, ASP.NET
- SQL, MySQL Workbench, MS SQL Server
- Design Patterns, Data Structures, Algorithms, MVC Architecture
- Web Services, Web Frameworks, REST, SOAP
- Git & GitHub, Figma, Heroku, Handlebars, Server Managers, AWS Technologies
- Project Management, Mobile development
- Language Skills ○ Fluent in English
    - ○ Bisaya & Tagalog - Working proficiency (able to understand much of the spoken language)

EDUCATION & CERTIFICATIONS

New England Institute of Technology, East Greenwich, RI
Bachelor of Science Degree, Information Technology/Software Engineering – 09/2022
Academic Achievements:

- GPA 4.0, Earned Dean's List every term
- Member of Phi Theta Kappa (Honor Society) and Member of Alpha Chi (National College Honor Society)
- Awarded "**Best of Tech Award – 2023**" and "**Best of Tech Award - 2021**." This role is awarded to one student in the program who demonstrates the highest level of achievement.

CERTIFICATIONS

- AWS Academy Cloud Foundations
- AWS Academy Cloud Developing
- AWS Academy Machine Learning Foundations
- AWS DeepRacer: Driven by Reinforcement Learning
- Multiple DataCamp certifications including Data Analysis in Excel, Data Manipulation with pandas, Data Science for Everyone, pandas Foundations, and Intermediate Python
- Udemy's "Become a Good Matlab Programmer in 30 days"

BACHELOR SENIOR PROJECT:

- Collaborated with a team of two to design and implement the start of an inference engine. The nascent system aims to connect related ideas and content among videos, documents, and images to allow K-12 teachers to upload their lecture content or other learning materials online to a localized repository of information. Students may easily access the information in a meaningful way via complex queries.

- The application was built with a multitiered architecture with advanced technologies. Personally developed the underlying database, data analytic chart, and contributed to middleware routes, application logic, and UI panels' design.

ASSOCIATE CAPSTONE PROJECT:

- Collaborated with a team of three to plan, design, and implement an E-Commerce Customer Relationship Management System for supermarket commercial organizations that is designed to provide services and goods, such as mass consumer food products.
- The application was built with a multitiered architecture with advanced technologies. Personally developed the underlying database, data analytic charts, and contributed to UI panels' design.

PROFESSIONAL EXPERIENCE

Department of Defense, USARIEM, Natick, MA 5/1/2023 – 4/29/2025

Undergraduate ORISE Fellow

The United States Army Research Institute of Environmental Medicine (USARIEM) seeks to enhance the U.S. armed forces' health, performance, and lethality under extreme environments through rigorous medical research.

- Translated a Heat Strain Decision Aid (HSDA) model to JavaScript with a web-based interface.
    - The HSDA model is a risk assessment tool for heat related illnesses and injuries.
    - The work-rest table generator web application predicts core body temperature and is used to generate maximal work times and work-rest guidance tables.
    - Ported from Java code source and MATLAB dependencies to JavaScript to enable convenient access to other researchers through a user-friendly web-based interface.
    - The model ingests warfighter's anthropometrics, environmental conditions, clothing ensemble characteristics, and work activity levels.
    - The algorithm estimates and simulates the soldier's core temperature over time for different activity levels, which is helpful for mission planners and warfighters that seek guidance on recommended safe work times.
- Wrote a 37-page technical report for the HSDA model and web application.
    - Served as the primary author of five researchers to describe the history and methodology behind maximal work times and work-rest guidance tables.
- Developed data collection instrument (DCI) electronic survey forms to be deployed in a field study at U.S. Army Fort Leonard Wood Sapper unit.
    - DCIs had to be implemented in a quick turnaround of 2-3 weeks, and be usable on Android devices.
- Researched and started ongoing design of a common data archive (CDA).
    - CDA is a big open data lake intended to house data collected from wearables across multiple studies and protocols generated within USARIEM for the purpose of data mining.
    - Collaborated with an American engineering and scientific consulting firm, Exponent, under a Cooperative Research and Development Agreement (CRADA) to assist each other with the ideation and design of independent common data repositories.
    - Collaborated with MIT Lincoln Laboratory to upload USARIEM study data collected from Lightning Academy (Wahiawa, Hawaii) to their Rapid AI Platform for Innovating Data Science (RAPIDS) platform. Information regarding constructing a CDA were gained in the process.
- Developed a Healthy Eating Score Assessment Tool (HES_AT) web-based application.
    - The JavaScript web tool assesses and scores diet quality among military personnel. The algorithms were developed and improved under the guidance of USARIEM Military Nutrition Division (MND) scientists.

    - The survey considers the respondent's anthropometrics, exercise routine, weight goals, and eating habits across different food categories. Upon submission, scores are immediately rendered to the participant, and a CSV file is downloaded for the researcher's use.
- The fellowship position is administered by the Oak Ridge Institute for Science and Education (ORISE). ORISE is a U.S. Department of Energy (DOE) institute managed by Oak Ridge Associated Universities (ORAU) through a contract between ORAU and DOE.

Books For Pinoys Foundation, Seekonk, MA 10/2022 – 11/2022
Website Developer (Contractor)
The organization helps to build libraries for the less fortunate children in the Philippines and has a vision of helping every Filipino child to read and learn.

- Contributed to a team in the website design. Responsible for the development of the company's web presence using technologies including CPanel to manage the server backend, and CSS and Joomla generic framework to build the frontend UI.
- Collaborated with the project manager to set up, create, and format the layout and template of the site.
  - Website: https://booksforpinoys.com/index.php

VOLUNTEER EXPERIENCE

New England Institute of Technology NECHE Program 10/2021 – 12/2022

- Informally assisted in the data parsing and analysis of New England Institute of Technology's Systematic Plan Of Evaluation program for compliance with the New England Commission of Higher Education (NECHE).
- The program was written in Python primarily using pandas and NumPy libraries to clean and organize the collected data.
- Personally involved in the design and implementation of code, and received oversight in most phases of the development process with a subject matter expert.
- Later in the development pipeline, the executed program would output a Microsoft Excel spreadsheet that would be fed as input to Microsoft Power BI to visualize classroom and institutional learning in a meaningful way.