PAT NOM

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WORK EXPERIENCE

Software Engineer I September 2020 – June 2023
Land Processing Distributed Active Archive Center (LP DAAC) USGS, Sioux Falls

- Revitalized 12 enterprise-level applications by overhauling over 100 outdated libraries across various programming languages, allowing the groundwork for automatic version upgrades to fortify their longevity and ensure seamless functionality.
- Collaborated closely with NASA scientists to meticulously gather project requirements, resulting in the creation of over 150 Jira tickets, facilitating the development of new features, and enhanced project management strategies.
- Streamlined project management by implementing Sprint methodology to organize and prioritize ongoing tasks; with the transition to SAFe methodology, setting the stage for enhanced project efficiency and long-term success.
- Implemented rigorous security protocols and conducted routine vulnerability assessments using Acunteix web scanner, guaranteeing the impregnable security of all LPDAAC applications.

Software Engineer Internship June 2020 – September 2020
EROS CalVal Center of Excellence USGS, Sioux Falls

- Executed comprehensive research to develop a georeferencing automation system utilizing Landsat 8 data.
- Engineered and implemented a Python scripting algorithm with the ArcGIS API to automate the production of precise georeferenced images, streamlining the mapping and geospatial data processes.

PROJECTS

LP DAAC External Website September 2020 – June 2023
https://lpdaac.usgs.gov

- Contributed to the development of new features and played a pivotal role in the continuous maintenance of a high-traffic website, serving over 200,000 monthly visitors.
- Collaborated in a 4 person team to improve the user experience for LPDAAC scientists to create news articles, ASTER Products, and E-Learning pages.
- Initiated a comprehensive overhaul that significantly reduced loading times and ensured consistent and efficient data access by identifying persistent issues in the publications table.
- Piloted the creation of the podcast page by leveraging Django to seamlessly interface with Wagtail CMS. This innovative addition provided visitors an additional resource for accessing information on ECOSTRESS, EMIT, and other NASA missions.

ASTER Emergency Scheduling Interface and Control System (AESICS) September 2020 – June 2023
https://aesics.cr.usgs.gov

- Facilitated communication by collaboratively engaging with AESICS users, ensuring an open and transparent dialogue to address their needs clearly and effectively.
- Enhanced the functionality of the AESICS table by introducing innovative features, such as filterable columns, customizable rows per page, and optimizing table loading for increased efficiency.
- Pioneered the development of a user-friendly feature, leveraging cron jobs to enable automatic date setting for entry expiration. This innovative approach enhances the user experience with a valuable quality-of-life addition, streamlining the management of entry timelines.

EDUCATION

South Dakota State University, Brookings, SD August 2017 – May 2021
B.E., Computer Science with Minors in Mathematics and Software Engineering
Magna Cum Laude

SKILLS

Languages:	Python, C++, C#, HTML5, CSS, Javascript, PHP
Frameworks:	Django, Flask, ASP.NET
Tools:	Docker, Kubernetes, Jira
Databases:	PostgresSQL
Version Control:	Git
Linux Distributions:	CentOS 7, RHEL 8