

KIT SCHNELLE

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Secret-cleared engineer with 5+ years across DoD contracts and five NASA internships spanning full-stack web development, AI/ML pipelines, AR/VR, data analytics, embedded systems, GIS analysis, and mission design.

SKILLS

Web Stack: TypeScript, JavaScript, Python, Angular, React, Next.js, Node.js/Express, FastAPI, Java, Spring Boot, SQL/JPQL, PostgreSQL, SQLAlchemy, HTML/CSS, Tailwind, WebSockets

AI/ML & Data: PyTorch, Brevitas, FINN, Hugging Face Transformers, Scikit-learn, pandas, NumPy, Jupyter, Redis, Elasticsearch, Apache ECharts, Three.js, D3.js, Plotly

DevOps: Docker, Kubernetes, Jenkins, CI/CD, Git, Jira, Azure DevOps, SonarQube, Postman, pytest, Jest, Linux/Bash

GIS: PostGIS, Leaflet, GeoJSON, AIS, JMARS, WebGL, Leaflet

Embedded & AR/VR: C, C#, Unity 3D, Blender API, Arduino

EXPERIENCE

Software Engineer - KBR Dec 2022 – Present

- Develop full-stack applications supporting AI/ML and data analytics workloads for DoD customers.
- Build Angular/TypeScript responsive front-ends and Express.js/Spring Boot back-end services with SQL and JPQL data access layers.
- Fine-tuned Hugging Face transformer models for an automated PDF parsing pipeline combining NER, zero-shot document classification, and QA / semantic similarity; improved extraction accuracy on domain-specific documents.
- Deploy services through Jenkins CI/CD pipelines containerized with Docker and orchestrated on Kubernetes; enforce code quality gates with SonarQube.
- Developed Apache ECharts dashboards to surface analytic datasets.
- Managed a team through KBR's internship program; leading a project from scoping through delivery and provided mentorship on full-stack development practices.

Software Engineer Intern - NASA Kennedy Space Center (OSTEM) Jan – Apr 2021 & May – Sep 2021

- Contributed to RMIT 2.0, a NASA-published tool (KSC-14470) leveraging Blender's Python API to convert high-fidelity CAD models from CATIA, Creo, and 3DS Max into AR/VR-compatible formats via polygon decimation, hierarchy flattening, material optimization, and glTF export for Unity 3D.
- Integrated RMIT with VECTR and MRET, enabling CAD pipelines to feed directly into SLS/Artemis crew training environments and Roman Space Telescope engineering workflows, where AR tooling significantly reduced assembly time and enabled greater alignment accuracy.
- Authored the end-user documentation for RMIT, enabling handoff to NASA engineers across KSC.

Software Engineer Intern - NASA L'SPACE (NPWEE) May 2019 – Sep 2019

- Developed a prototype for an autonomous navigation system and authored proposal for patented submission to NASA Technology Transfer (NTR), leveraging astropy catalog data to compute spacecraft orientation from star field geometry, visualized in Unity 3D.
- Authored a technology proposal for a lunar surface IoT sensor network, as part of the proposal writing and evaluation program.

Research Intern - NASA L'SPACE (MCA) Dec 2018 – Apr 2019

- Conducted multi-layer GIS analysis in JMARS correlating thermal infrared, spectral (CRISM/OMEGA), topographic (MOLA elevation), and terrain morphology datasets to identify candidate Martian crater sites for in-situ water extraction.
- Designed the scientific payload architecture for a kinetic impactor cryoprobe concept, leveraging impact-induced heat transfer to melt subsurface ice without mechanical drilling, minimizing payload mass and mission cost.
- Co-authored Preliminary Design Review (PDR) covering mission objectives and instrumentation, and ISRU water extraction methodology.

Software Engineer Intern - NASA (NCAS) Jun 2017 – Sep 2017

- Designed a Mars mission flight plan and solely implemented autonomous rover navigation software and Arduino-based sensor systems in embedded C; our team earned 1st place in the multi-stage engineering challenge.

Software Engineer Intern - Codework Digital Jan 2020 – May 2020

- Developed a client's educational platform in WordPress/PHP with responsive front-end layouts.
- Managed the project lifecycle end-to-end in Jira using Gantt-chart planning, coordinating designers, developers, and stakeholders through testing and deployment.

Software Support Analyst - iEnergizer Oct 2018 – Feb 2019

- Performed functionality and regression testing on AAA game titles; triaged and resolved technical issues through FreshDesk.

EDUCATION

B.S. Computer Science - Fort Hays State University 2015 – 2020

Member of Phi Theta Kappa and Sigma Alpha Pi Honor Societies

Model UN - Non-Proliferation of Nuclear Weapons Committee: Awarded Outstanding Position Paper, Outstanding Delegation in Committee, Outstanding Delegation (NY - 2015).