

# Kennan LeJeune

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## Summary

Software Engineer with academic background in theoretical computer science and machine learning, with a broad range of professional experience in full-stack SWE, DevOps, and MLOps. Driven by quality tooling, efficient build systems, and seamless infrastructure as a means to achieve a delightful developer experience.

## Skills

- **DevOps:** Kubernetes (k8s), Docker, GitOps with ArgoCD, Nix, Gradle, GitLab CI, GitHub Actions
- **Backend:** Java and Kotlin (Spring Boot), Python (FastAPI/Flask), Node (Express/NestJS), Postgres, Elasticsearch, SQLite, Apache Jena, GraphDB
- **Frontend:** Typescript and Javascript (Angular/Svelte/Vue), Tailwind, HTML, CSS
- **Data Science:** Python (Pandas/NumPy/SciPy/NetworkX/Numba/Ray/sklearn), HPC (Slurm)

## Experience

### Software and Infrastructure Engineer

Feb 2022 - Present

*The Johns Hopkins University Applied Physics Lab - Laurel, MD*

- DevOps and infrastructure engineering lead for a group of 50+ technical staff;
  - Spearheaded build-out and administration of a RKE2 Kubernetes cluster used by 20+ teams
  - Deployed k8s-based GitLab CI runners and ArgoCD for GitOps deployments to replace a legacy Jenkins CI/CD workflow
  - Led effort to migrate a large fleet of VM deployments to GitOps and standardize deployments across teams, allowing for more efficient resource sharing and improved service uptime while reducing overall DevOps expenditure by 75%
- Technical lead for a team of 10+ software engineers, data scientists, and epidemiologists; developed a state of the art bio-surveillance pipeline to detect outbreak events from public reporting and assess real-time pandemic risk
- Led an effort to migrate a large JavaEE application to Spring Boot; updated build-system using Gradle Kotlin DSL and Jib to reduce build times by 50%

### Machine Learning & Software Engineering Intern

May 2019 - Jan 2022

*The Johns Hopkins University Applied Physics Lab - Laurel, MD*

- Performed literature review and implementation for DNA sequence feature extraction and dimensionality reduction methods using Python, NumPy, Pandas, Scikit-Learn, and Keras
- Contributed features for a full-stack Angular frontend and JavaEE backend for an active learning NLP pipeline for document entity tagging, event extraction, and relevance ranking

## Projects & Open Source

### NixOS Community

July 2020 - Present

- Active user of Nix home-manager, nix-darwin, and NixOS for personal systems management
- Personal configurations are an open-source learning resource for others within the community
- Occasional contributor to several projects in the Nix ecosystem

### Graduate Research

Aug 2019 - Jan 2022

*CWRU Department of Computer and Data Sciences - Cleveland, OH*

- Developed a multi-agent learning framework built in Python, NumPy, Scikit-Learn, and NetworkX; leveraged a large-scale Slurm HPC cluster for distributed experiments and training
- Investigated the behavior of several collaborative learning strategies to reduce time to reach a network expertise threshold

## Education

Case Western Reserve University - Cleveland, OH

Aug 2017 - May 2022

*Computer Science - B.Sc 3.75/4.00 GPA, M.Sc 4.00/4.00 GPA*

*Thesis: [Dynamic Structure Adaptation for Communities of Learning Machines](#)*