Ivan Kisselev

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EDUCATION

University of Virginia (Charlottesville, Virginia) **August 2022 - May 2026**

B.S. Computer Science

GPA: 4.0

Relevant Coursework: Software Engineering, Data Structures/Algorithms, Machine Learning, Cloud Computing, Scale Applications, Computer Systems, Databases, Discrete Math, Linear Algebra, Probability

PROFESSIONAL EXPERIENCE

theCourseForum - *Software Engineer* **September 2025 - Present**

- Developing and maintaining a widely used UVA course selection website with 10000+ active users
- Cut ALB spend 98% by fronting the app with CloudFront, streamlining caching behaviors
- Optimizing infrastructure (autoscaling, right-sizing, backups) to increase uptime and reduce costs
- Dockerized services deployed on AWS (ECS, RDS/PostgreSQL) for grades/reviews storage
- Shipping features across Django Python web framework + HTML/CSS/JavaScript

Fannie Mae (AI Gateway) - *Software Engineer Intern* **June 2025 - August 2025**

- Enabled 1min+ jobs and raised max runtime 15x by deploying async long-running LLM workflows with polling and pub/sub patterns (Terraform, AWS Lambda, SNS, SQS, Apigee, Python, JavaScript).
- Led bi-monthly Design Forum session as sole presenter to 80+ engineers, detailing technical design and implementation of production-level long-running LLM workflows in the AI Gateway.
- Developed automated regression test suite (Postman, Newman, GitLab CI/CD) covering 15+ functional scenarios (streaming, rate/budget limits, key expiration, caching, load-balancing, and fallback)
- Defined rate/budget-limiting enforcement points within the REST request flow, formalized best practices for secure API key distribution, streamlined provisioning via Portkey API, and built an asyncio + semaphore-based client-side rate-limiting reference implementation for internal developers.

Dominion Energy (Modeling) - *Software Engineer Intern* **May 2024 - August 2024**

- Achieved ~95% accuracy detecting/translating substation schematics into PSS/E 35 generation commands
- Created backend, GUI, and substation drawing paradigm from scratch integrating Python, OpenCV, NumPy, Tkinter, PDFMiner, Visio, and PSSPY API
- Reduced modeling time by ~50% for new substation topologies while eliminating 3 sources of error
- Coordinated numerous meetings with 10+ engineers across Area Planning and Modeling teams, devised optimal solutions based on team needs and iterative feedback between sprints

PROJECTS

ScrollStudy *(Chrome Extension)* **December 2024 - Present**

github.com/IvanTheEngineer/ScrollStudy

- Developing a Chrome Extension to inject study material into the feed of popular social media sites utilizing JavaScript, HTML, CSS, and Google's platform-specific configuration files
- Utilizing Fetch API to send API calls to the Gemini 2.5 Flash (experimental) model for content generation and strength/weakness analysis. Enforcing structured JSON output and handling asynchronous calls.

Website Fingerprinting with Machine Learning **November 2024 - December 2024**

github.com/IvanTheEngineer/Website-Fingerprinting

- Developed ML pipeline using PyShark, NumPy, Selenium, Pandas, Scikit-Learn, and Tensorflow
- Performed packet capture, data normalization, and analyzed 6 different feature extractions yielding a peak accuracy of 53% across 100 classes (1% baseline)

LANGUAGES AND TECHNOLOGIES

Tools/Libraries/Frameworks: Git + CI/CD, AWS (S3, SQS, SNS, Lambda, ECS, CloudFront, Route 53), Terraform, HTML/CSS, PostgreSQL, React, ViteJS, Heroku, Bootstrap, Postman, JUnit, Gradle, Django, TensorFlow, Firebase

Programming Languages: Python, Javascript, Java, Go, SQL, C, Swift