

# Ruiyu Zhang

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## EDUCATION

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- **University of Virginia, College of Arts and Sciences** Charlottesville, VA  
*Bachelor of Arts in Computer Science* *Expected May 2026*
  - GPA: 3.9
  - Relevant Coursework: Advanced Software Development, Software Development Essentials, Data Structures and Algorithms I and II, Machine Learning, Cybersecurity, Computer Systems and Organization I and II, Discrete Mathematics I and II, Web Applications, Artificial Intelligence

## EXPERIENCE

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- **Software Engineer Intern** June 2025 - August 2025  
*Appian* *Mclean, Virginia*
  - Engineered Python scripts to collect GitLab CI/CD metrics and built a centralized Datadog dashboard, adopted by 30+ teams and 200+ engineers to track DORA metrics (deployment frequency, failure rate, MTTR).
  - Configured a single CI job to compare failures between dev and master branches, cutting root cause detection time by 40% and saving developers 5+ minutes per pipeline failure.
  - Optimized Java unit testing by merging 200+ tests, reducing CI runtime by 25% per run.
  - Developed 15+ unit tests for Python scripts managing GitLab pipelines, improving coverage and reducing errors by 30%.
  - Built a Python-based monitoring tool forwarding Argo CD data to Datadog, enabling real-time alerts and reducing outage response time from 15 minutes to under 5 minutes.
- **Software Engineer Intern** June 2024 - April 2025  
*USDA (Department of Agriculture)* *Missoula, Montana*
  - Designed and launched USDA's first web application for visualizing wind speed vectors using MongoDB, React.js, Node.js, saving 10+ hours/week for 200+ firefighters nationwide.
  - Implemented automated logging and ZIP packaging in USDA's C++/Qt software, improving usability for 200+ users and reducing manual errors by 20%.
  - Integrated high-resolution (HRRR) weather data with C++, AWS S3, GCP, increasing wind model flexibility by 10% and enabling historical + forecasted simulations.
  - Developed and deployed an analytics dashboard with PHP/JavaScript on Apache2, monitoring lab systems and guiding resource allocation.

## PROJECTS

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- **Course Reviews — JavaFX, SQLite, FXML** Charlottesville, VA
  - Led a team of four to build a desktop app for UVA students to create, search, and rate courses; implemented rating, filtering, and search features and conducted testing with 30+ peers, informing UI/UX refinements.
  - Designed a lightweight SQLite schema and integrated it with JavaFX components to support real-time filtering and queries across 100+ course entries.
- **Housing Whistleblowers — Django, Heroku, PostgreSQL, AWS S3** Charlottesville, VA
  - Architected a whistleblowing platform enabling students to report dorm issues securely, with administrator dashboards for real-time updates and role-based responses.
  - Conducted Agile sprints and user testing with 20+ students, incorporating feedback into iteration cycles; improved report submission time by 30% through streamlined forms.
  - Integrated AWS S3 for storing uploaded evidence (images, documents) and deployed on Heroku with a PostgreSQL backend.

## TECHNICAL SKILLS

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- **Languages:** Python, C++, Java, JavaScript, PHP, C
- **Frameworks:** React.js, Node.js, Django, React Native, Qt
- **Tools/Platforms:** Apache Spark, Scala, Git, Docker, Linux, CMake, MongoDB, PostgreSQL, Datadog, AWS, GCP, Kubernetes, Apache Spark, Scal