

PATRICK GILMARTIN

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EDUCATION

University of Virginia, College of Arts and Sciences, Charlottesville, VA, Cumulative GPA: 3.6

Intended: May 2026

Declared: Bachelor of Arts in Computer Science; GPA: 4.0

Intended: Bachelor of Science in Economics

Relevant Coursework: Introduction to Statistics, Introduction to Information Technology, Introduction to Programming, Discrete Math and Theory, Data Structures and Algorithms, Computer Systems and Organization, Software Development Essentials

SKILLS AND HONORS

Skills: Java, JavaScript, Python, HTML, CSS, Node.js, React, SQL, R, Spyder, MongoDB

Honors: Access UVA Scholarship, UVA Catalyst Program, Tri-Alpha Honor Society, Dean's List

RELEVANT PROJECTS

To-Do List Application, Programmer

Summer 2024

- Engineered a dynamic to-do list application using JavaScript, React, Node.js, HTML, and CSS, enabling users to upload and parse syllabi in PDF/Excel formats, with OCR for non-copyable text. Project initiated in collaboration with IBM
- Automated event scheduling by parsing syllabus content to populate a calendar with academic deadlines, leveraging libraries like tesseract.js, moment.js, and fullcalendar
- Integrated email notification system using Node.js, Nodemailer, and cron jobs to send automated reminders for upcoming deadlines, enhancing user time management and productivity

Course Reviews Capstone Project, Programmer

Spring 2024

- Engineered a JavaFX-based Course Review Application featuring user authentication, real-time course search, and JSON data export, utilizing Java for backend logic, JavaFX for UI, and JDBC with SQLite for database management
- Developed a robust CRUD system, managing user sessions and data persistence, ensuring compliance with database normalization standards, and creating a user-friendly GUI for course review operations
- Ensured data integrity and seamless database interactions through comprehensive use of JDBC, optimizing SQL queries for performance, and implementing database normalization techniques with SQLite

Predicting Voter Turnout Research Project, Analyst

Fall 2022

- Analyzed Virginia voter turnout using Python and R, developing linear regression models and residual plots to assess demographic impact. Utilized scatterplots, confidence intervals, and t-tests to forecast electoral rates and strategically allocate campaign budgets
- Identified median income as the strongest predictor among various demographic factors, with voter turnout increasing by 0.2 people per dollar increase in median income, highlighting high-income regions as optimal for investment

WORK EXPERIENCE

UVA Housing and Residence Life, Resident Advisor

Winter 2024 - Present

- Actively supervise 39 residents at UVA's International Residential College, fostering a culturally rich and safe environment
- Organize monthly initiatives with a \$550 budget, promoting language exchange and cultural awareness, overseeing planning, budget management, and execution using advanced Excel skills, and coordinating with third-party services
- Create inclusive community programs, enhancing academic and social experiences while efficiently managing resources

IBM Accelerate Program, Software Development Track, Intern

Summer 2024

- Selected for IBM's 8-week Accelerate Program (5% acceptance rate), gaining proficiency in JavaScript, Node.js, CSS, and React while mastering data structures, full-stack development, and web app security. Led projects utilizing Generative AI and cloud computing, demonstrating expertise in developing scalable applications with Agile methodologies
- Earned a professional certification by collaborating with top IBM developers and technical leaders, showcasing skills in CI/CD pipelines, Docker, Kubernetes, and version control systems. Developed and optimized machine learning models, integrating them into real-world applications and enhancing software deployment efficiency

Oceanside Library, Data Analyst

Summer 2024

- Managed and analyzed over 50,000 data points using Excel and Python, employing data cleaning and automation scripts to improve data accuracy, enhancing digital outreach initiatives, and increasing digital presence by 12%
- Researched and implemented an AI chatbot into the library's interface, answering an average of 32 user queries daily, leading to a significant rise in website usage
- Conducted comprehensive research on cloud platforms, recommending and assisting in the implementation of a new cloud service that enhanced data management capabilities and operational efficiency

EXTRACURRICULAR ACTIVITIES

UVA Catalyst Program, Inductee

Fall 2023 - Present

- Selected for a three-year, 17-credit, career readiness program with a 30% acceptance rate, focusing on leadership, critical thinking, and communication skills. Conducted a semester-long "Wicked Problem" project seen [here](#)
- Created a comprehensive capstone project portfolio, demonstrating advanced skills in leadership, project management, digital media production, and practical coding applications

Project Code, VizOp Algorithms Team, Programmer

Fall 2023 - Present

- Coordinate within a 27-member cross-functional team to compute options contract premiums using the Greeks, contributing to the development of algorithmic predictions and interactive 3D visualizations for enhanced pricing analysis, leveraging Python and Java