Austin FitzCorbett

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***né* Austin FitzGerald**

Education

University of Wisconsin - Platteville *BS Software Engineering* 09/2017 to 05/2021

Skills

Programming Languages: Java, C#, TypeScript, JavaScript, Python

Markup Languages: LaTeX, Markdown, HTML

Frameworks: Angular 2+, AngularJS, Spring, .NET

Databases: SQL Server, PostgreSQL

Software: Microsoft Office, Jira, BitBucket, Confluence, Bamboo, GitHub, GitLab, ServiceNow, WebSphere, AWS, SonarQube, Burp Suite

Industry: Agile, Scrum, Machine Learning, WCAG Accessibility, CI/CD, Application Security, Risk Assessment

Work Experience

Nelnet (Remote) 08/2022 to Present

Software Architect - Application Security

I work with hundreds of software engineers and architects, managers, and cybersecurity analysts to improve the security posture of Nelnet systems by maintaining automated SAST and DAST implementations, maintaining artifact storage systems and automated supply chain risk assessment, leading threat modeling, and running our vulnerability management program. I regularly review C#, Java, TypeScript, and SQL code for software systems that support our 16 million borrowers.

I spearhead our successful Security Champions Program and architect its custom gamification platform (.NET/Angular/SQL-Server running on AWS EC2). Along with stakeholders from throughout the company, I design security and compliance training and ensure that our processes and systems are complaint with contractual and regulatory requirements. Everything I do can come under scrutiny by the Federal Student Aid office, so I am careful to regularly justify my decisions and risk assessments using the NIST SP 800 series and guidance from sources such as the NIST SSDF and the OWASP ASVS.

Nelnet (Remote) 06/2021 to 08/2022

Software Engineer

I worked on a Scrum team that maintained over a dozen business critical software systems which supported internal and external stakeholders, including custom business continuity management software and a service that allowed Intuit Mint to collect federal student loan data on behalf of borrowers. I helped design, implement, and maintain five web applications (Spring/Angular/SQL Server) (<150k LoC each), leading the architecture of the last system we built. I also maintained software systems using technologies such as IBM Db2, AWS Lambda, the ServiceNow API, Helm, AngularJS, and WebSphere.

I helped improve our team's productivity by advocating for and implementing automated code quality enforcement and procedures to streamline production deployments. I was a notable contributor to the Unifi Design System (https://unifi.nelnet.io/), where I engaged with UI/UX designers and accessibility engineers, then helped hire two developers to work on the project fulltime. I am also proud to have mentored an intern who was hired at Epic after graduation.

UW-Platteville Residence Life (Platteville, WI) 01/2019 to 05/2021
Senior Assistant, Resident Assistant
As a senior assistant I was responsible for coordinating administrative duties, health and safety protocols, and acting as a co-supervisor for seven resident assistants. I juggled 30 hours of work per week along with a full load of classes, earning a 3.87 GPA, Senior Assistant of the Semester in the fall of 2020, and the Lifetime Residence Life Award in the spring of 2021.

As a resident assistant I was responsible for overseeing a community of approximately twenty-five undergraduate students, providing information on university resources, and developing an educational atmosphere. I was voted by my peers as the Staff Member of the Semester in the fall of 2019.

Nelnet (Remote) 06/2020 to 08/2020
Software Engineering Intern
See "Software Engineer" above, a position that became a continuation of this internship.

UW-Platteville CSSE Department (Platteville, WI) 09/2018 to 05/2020
Lab Assistant, Undergraduate Researcher
As a lab assistant I provided support to students enrolled in introductory computer science courses, assisting them understand and complete assessments related to core concepts regarding data structures, algorithms, and object-oriented programming.

As an undergraduate researcher I worked in a team under Dr. Selent to research, design, and develop multiple predictive models in Python used to predict student struggle in CSSE courses; our team won 2nd place in the 2019 WSTS Poster Symposium. I also worked under Dr. Alkhushayni to implement a unique set of chronic disease risk assessments for a personal health application.

Organizations

Institute of Electrical and Electronics Engineers 06/2023 to Present
Member
IEEE Computer Society Member; Chicago Section; Member No. 99451128

Kane County Clerk 11/2022 to Present
Election Judge
I served as an Election Judge in Kane County, Illinois during the 11/2022 and 05/2023 elections.

Association for Computing Machinery 09/2018 to 05/2021
Student Member
I was a regular attendee of on-campus meetings and events such as the 2018, 2019, and 2021 International Collegiate Programming Contests.

Westview Elementary Coding Club 09/2018 to 03/2020
Volunteer Mentor
I mentored 3rd and 4th grade students as part of a coding club at Westview Elementary in Platteville, Wisconsin. We utilized curriculum provided by Code.org and Google's CS First.

Projects and Publications

Nelnet Unifi Design System - Angular Library 06/2021 to Present
I have made major contributions to the Angular library that implements Nelnet's "Unifi" Design System, which is used in dozens of customer-facing and internal-facing web applications including Nelnet's flagship loan servicing application used by 16 million borrowers (https://secure.nelnet.com/).

HealthTracker: Monitoring Health Trends and Assessing Disease Risk 08/2021
I completed this research under Dr. Alkhushayni as an undergraduate at UW-Platteville. This paper describes HealthTracker, a mobile health application to record, store, display, and analyze personal health data. This application allows an individual to log several types of data encompassing their personal health. HealthTracker serves as a model for both a recording and a recommending system.

Applying Predictive Models to Course Curricula 07/2019
I completed this research under Dr. Selent as an undergraduate at UW-Platteville. The purpose of our research was to provide data and tools necessary for students and faculty advisers to predict and prevent academic struggle. The dataset we used consists of historical grade data mined from UW-Platteville graduates and withdrawls between the years of 2013 and 2018. We used multiple predictive models to predict student success over a varying amount of time and compared the performance of these models.