Nathan Dunn

nathanfdunn@gmail.com

https://www.linkedin.com/in/nathanfdunn/

Skills

- Python, C#, SQL, R, Scala, JavaScript, TypeScript, CSS, Java, Git, Shell Scripting
- AWS, React, .NET, WinForms, MVC5, Android, Node, Angular, REST, SOAP, Django
- Data Structures, Algorithms, Algorithm Design and Performance Analysis, Cybersecurity
- Inferential Statistics, Linear Models, Linear Algebra
- MLOps, Data Engineering, Machine Learning, Large Language Models

Experience

Audible

Data Science Engineering Team, Software Development Engineer II   April 2022 – Present

- Evaluate and leverage cutting edge AI models and infrastructure, such as LLMs
- Develop tools to support development and productionalization of machine learning models by data scientists
- Develop web application using AWS and React frontend
- Build and maintain dozens of ETL jobs using Python, SQL, and Scala
- Integrate with internal API's to populate metadata for data lake
- Design and implement permissions model to secure access to infrastructure
- Design schemas for database tables
- Perform code reviews across 3 functional areas
- Research tasks and features to inform sizing estimates for quarterly planning
- Implement data retention policies to comply with internal and legal privacy requirements
- Develop, test, and document protocols for disaster recovery
- Take internal course offerings on various topics in machine learning
- Provide mentorship for new team members
- Create and maintain wiki-style documentation

FieldStack

Full Stack Software Engineer   June 2017 – March 2022

- Develop REST API using ASP.NET Core
- Develop retail software with emphasis on lean principles for mid to large sized retail chains
- Develop E-Commerce web platform using ASP.NET MVC5, JavaScript, CSS
- Develop point of sale desktop application using WinForms
- Develop Android mobile application for use in warehouses
- Database development including table design, stored procedure design, query optimization
- Frontend implementation of designs provided by UI/UX specialist using Razor syntax
- Integrate with shipping carrier API's for package tracking, delivery estimates, etc.
- Develop system for sales tax calculation and recording
- Integrate with 3rd party warehouse management systems (WMS)
- Integrate with 3rd party API for sending and receiving SMS messages
- Design and implement GUI for customizing email and SMS notifications with support for templating syntax
- Implement pub/sub event system
- Develop and configure batch jobs for data exports/imports, via SFTP, web APIs, etc.
- Develop framework for batch jobs to standardize argument parsing, logging, error notification, database access, etc.
- Talent search including career fair representation and administering technical interviews
- Mentor and train interns and new hires
- Review pull requests to ensure health of code base
- Use Agile methodologies, including backlog refinement using Jira
- Create and maintain documentation using Confluence articles

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Unum

Customer Solutions, Software Engineer   June 2015 – June 2017

- o Develop web applications to administer insurance policies using ASP.NET with C#
- o Use and evaluate Node, Angular, Gulp, and other modern JavaScript tools to create modernized web portal
- o Create and remediate web applications in compliance with Web Content Accessibility Guidelines 2.0 (WCAG)
- o Participate in scrum ceremonies e.g. sprint planning, backlog refinement, story mapping
- o Create tools to help streamline and automate application deployment
- o Maintain codebase using Git for version control
- o Onboard and partner with external UI/UX vendor
- o Run ad-hoc SQL queries against source systems to provide metrics to business

University of Maine

Mathematics Department, Simulation Researcher   Jan 2013 – May 2013

- o Used R programming language to simulate and analyze epidemiological models
- o Derived mathematical descriptions of system and compared to simulations

Computer Science Department, Teaching Assistant   Sep 2012 – May 2013

- o Helped students use Excel in the context of business analysis
- o Helped students code and debug Visual Basic applications

Education

University of Maine at Orono, Honors College   Graduated May 2015

B.S. Computer Science, B.A. Mathematics, Statistics Minor

GPA: 3.95 *summa cum laude*

Graduated with Highest Honors for Honors Thesis titled *Pattern Recognition and Matching in Ice Core Data*

Awards & Honors

Senior Recognition Award from School of Computing and Information Science

Senior Recognition Award from Department of Mathematics and Statistics

Member of *Phi Beta Kappa*

Member of *Phi Kappa Phi*

Member of *Pi Mu Epsilon*

Exams / Learning Programs

Actuarial Exam P (Probability)	2013	Score: 10
Actuarial Exam FM (Financial Mathematics)	2014	Score: 7
Putnum Competition	2014	Score: 20
Amazon MLU Day 1, Computer Vision	2022	Score: Pass
Amazon MLU Deep Learning 1, Deep Learning 2	2023	Score: Pass

Interests

A.I., Crochet, Video Game Development, Chess, Cryptography

Projects

https://dallestrations.com - Jackbox-style party game where players generate images using A.I. diffusion models

http://www.thismagiccarddoesnotexist.com – Creates Magic: The Gathering cards using A.I.

https://github.com/nathanfdunn/rsa-encryption-africa-congruence – Jupyter notebook presentation about RSA encryption

https://crocheteveryday.com/ - Crochet blog using Jekyll, hosted on AWS Amplify

https://github.com/MiniMechMedia/pico8-games – Collection of over 40 PICO-8 games created using custom framework

https://github.com/nathanfdunn/nand2tetris – 12-part independent study to build virtual computer starting from logic gates

https://github.com/nathanfdunn/fbchessbot - Facebook Messenger App for playing chess with friends