Matthew Czyr

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EDUCATION

Rensselaer Polytechnic Institute – Troy, New York   September 2017 – May 2021
  B.S. in Computer Science
  GPA: 3.69, *cum laude*
  Honors: Dean's Honor List, Rensselaer Leadership Award

SKILLS

Languages: Python, Java, C++, C, Go, SQL
Tools: AWS, Terraform, Docker, HBase, Hadoop, MapReduce, Redis, Memcached
Software: Git, Perforce, Linux

EXPERIENCE

FactSet – Norwalk, Connecticut   July 2021 – present
Software Engineer III in End of Day Pricing Team
- Migrated multiple on-premises data warehouses and ETL processes for historical market data to AWS
- Used Terraform to deploy and manage AWS resources, including EMR, DynamoDB, ElastiCache, Lambda, Glue, S3, ECS, Route 53, CloudWatch, and SNS
- Improved median response time of requests by 40% by implementing Memcached for commonly requested data
- Created new data processing job using MapReduce which allows delivery of critical market data to clients multiple hours earlier than was previously possible
- Implemented suite of AWS audit tools to flag unused or non-compliant resources, resulting in increased compliance with organizational standards and savings of over $2,000 per month
- Take one-week on-call shift once per month, promptly responding to tickets and alerts to resolve critical issues

FactSet – Norwalk, Connecticut   June 2020 – August 2020
Software Engineering Intern in Content Automation Team
- Developed web application using Python, Flask, Pandas, Dask, and AWS that allows content managers to efficiently load, explore, manipulate, and share extremely large datasets without engineering assistance, saving engineers several hours per week on average
- Worked in an Agile environment with daily standups and regularly presented progress to stakeholders

Pratt & Whitney – East Hartford, Connecticut   August 2019 – December 2019
Data Analytics Intern in Engine Data and Forecasting Group
- Developed enhancements for a C++ stochastic discrete event simulation modeling the lifecycles of military jet engines, allowing forecasters to more accurately predict the occurrence and impact of maintenance events

iD Tech – Amherst, Massachusetts   May 2018 – August 2018
Instructor at STEM education program
- Created lesson plans for and taught 3 different programming courses to groups of up to 10 students
- Consistently received the highest rating of "exceeded expectations" in weekly student and parent evaluations

PROJECTS

Modding – *Java* – mattczyr.com/mods   August 2015 – present
- Develop open-source modifications with over 150 million downloads which add new content to the game Minecraft
- Release regular updates containing bug fixes and new features based on community feedback

Simulation – *Python* – mattczyr.com/evacsim   November 2019 – May 2021
- Co-developed EvacSim, an open-source deterministic simulation that uses graph theory to model the effects of natural disasters and determine optimal evacuation routes for at-risk communities
- Won 2nd place out of 55 teams with demo at HackRPI 2019, a 24-hour hackathon

Web App – *Go, TypeScript, SQL* – mattczyr.com/shuttletracker   September 2018 – May 2021
- Lead development of Shuttle Tracker, an open-source web application with over 3,000 monthly users that tracks the locations of RPI campus shuttles in real time
- Implemented algorithm to predict shuttle locations, reducing interval between visual shuttle updates from 30s to under 1s
- Delivered weekly status updates and semesterly presentations on progress to the Rensselaer Center for Open Source