Zachary J. Rice

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Experience

Software Engineer – Agrible, Champaign   *October '15 – present*
- Backend developer for Morning Farm Report (MFR) – a web application that delivers field-level forecasts on yield predictions, nutrient availability, fieldwork conditions, hail events, weather and sustainability metrics.
- Develop idomatic Python code for our services hosted on AWS leveraging technologies like Kinesis, Firehose, Lambda and Redshift.
- Develop internal tools for managing workflows and scheduling jobs.
- Participate in daily standups, sprint planning and managing interns.

Teaching Assistant – University of Illinios, Urbana   *August '14 – December '15*
ECE 220, Computer Systems and Programming
- Taught lab sections twice a week and taught lectures when professor was absent.
- Topics included: C programming, LC3 assembly, recursion, pointers and data structures.

Systems Intern – State Farm Research and Development Center, Champaign   *May '14 – August '14*
- Developed a computer vision project using OpenCV and Xbox Kinect to detect and track unsafe driving behaviors. This project was eventually open sourced to a Kaggle competition, *State Farm Distracted Driver Detection*, for a $65,000 prize – https://www.kaggle.com/c/state-farm-distracted-driver-detection

Accelerator Control Intern – Fermilab, Batavia   *May '13 – Aug '13*
- Created a replacement for a legacy application that was used to manage thousands of hardware instruments throughout Fermilab's campus.

Education

University of Illinois, Electrical and Computer Engineering, Urbana, IL   *August '13 – December '15*
Bachelor of Science in Computer Engineering
- Member of ACM-SIG Music and ACM-SIG Computer Human Interaction
- GPA: 3.11/4.0

Parkland College, Urbana, IL   *December '12 – May '13*
Associate of Science in Electrical Engineering Sciences and Computer Science
- GPA: 3.61/4.0
- Awards: Dean's List, Walter H. Miller Scholarship, Heartland Bank Scholarship, UIUC's Employee Scholarship

Projects

Gronit – github.com/zricethezav/gronit
- Cron monitoring service written in Go.
- Free, self-hosted alternative to services like Cronitor.

GitLeaks – github.com/zricethezav/gitleaks
- Tool to search Git repos for leaked API keys and secrets
- Checks all commits and all branches for regular expression matches and high entropy
- Faster than alternative tool github.com/dxa4481/truffleHog

Others – github.com/zricethezav
- reddit_murmur - reddit streaming client that scores sentiment from subreddit comments
- TwitterKeep - Download and store tweets by search term or user in Postgres.
- TwitterScrape - Scrape tweets from html.

Skills

Languages: Python, C, Go, Bash, C++, Haskell, Java, x86, CUDA, PostgresSQL, LaTeX

Technologies: Django, Flask, AWS: {Kinesis, Redshift, Firehose, Lambda, EBS, ECS} Redis, Postgres, Elastic-Search, Celery, Heroku, Vagrant, Docker, Wireshark, BurpSuite, Selenium, Vim