Ramneek Chhatwal

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EDUCATION

Clemson University   Clemson, SC
Bachelor of Science in Computer Science (Previously Computer Engineering, B.S.)   GPA: 3.65/4.00
Mathematical Sciences Minor   Dec 2021

WORK EXPERIENCE

Windstream Communications   Greenville, SC
IP Engineering Intern   May 2021 – Aug 2021

- Developed Python script to alert and create a JIRA ticket when a Windstream serviced market fell below an available IP threshold, eliminating the possibility of a stale market
- Developed Python script to web scrape IP metrics for all Windstream markets and store in InfluxDB
- Visualized overall summary and individual IP metrics for all Windstream markets using Grafana
- Developed Python script to compile a list of the CIDR representation of free IP space available to be distributed to other markets
- Researched and initiated automation projects that were pitched to Windstream executives to continue development on

Itron, Inc. (3 Co-op rotations)   West Union, SC
Product Management and Network Development Intern   Jan 2019 – Aug 2020

- Developed an integration between an Amazon Echo and an Itron meter through a Raspberry Pi; created code in Python and the Bluetooth wireless protocol to connect the Raspberry Pi to the Amazon Echo; used previous code written in C and the Zigbee wireless protocol between the meter and the Raspberry Pi
- Tested meters by completing sniffer traces on Zigbee connectivity to valid devices and sending synthetic loads
- Worked on creating a REST API that optimized Bluetooth and Zigbee wireless protocols to transmit metrology data
- Travelled to Canada to help analyze and fix manufacturing issues on ~140,000 new meters to be deployed
- Managed all cloud devices and delegated on-site engineers to fix connectivity issues on pilot program to place ~120 Zigbee routers in homes to transmit data to cloud
- Put in charge of designing and prototyping hardware to allow ConEd NY to comply with new grid safety and National Electric Code protocols; created a technical document on installation, parts, and suppliers

PROJECTS

Clemson Makerspace x AWS – Captstone Project – Developed, designed, and integrated a sign-in and management system for the Clemson Makerspace into a single system for a fast and robust user experience. Built using AWS tools for the backend, with an Angular driven frontend and overseen by AWS software engineers.

Website Portfolio – Written in React.js with a Bootstrap template, created project to showcase a more detailed form of personal resume, along with links to all projects.

UNDERGRADUATE RESEARCH AND LEADERSHIP– CREATIVE INQUIRY

Injured Military Veteran Adaptive Sport and Paralympic Soccer Program Development   Jan 2018 – Dec 2021

- Objective 1: Provide adaptive sport activities coupled with community support and leadership services to Veterans with Disabilities and injured members of the Armed Forces
- Objective 2: Establish a Paralympic Soccer Team at Clemson and assist in the United States Paralympic Soccer Team
- Completed Mental Health First Aid and Adaptive Sport Certifications.

SKILLS

Programming Languages: Python, C++, C, Git, Java, React.js, YAML, JSON, R, HTML5, CSS, MATLAB, x86 Assembly
Methodologies and Protocols: CI/CD, Agile Methodologies, MVC, UML, Zigbee Wireless Protocol, REST API
Operating Systems: MacOS, Unix/Linux, Windows
AWS Tools: API Gateway, CDK, CloudFormation, CloudWatch, DynamoDB, EC2, IAM, IoT, Lambda, RDS, S3 ,SNS, SQS, VPC
Tools: Visual Studio Code, Vim, Azure DevOps, JIRA, Confluence, GitHub Actions, InfluxDB, Grafana