Utkarsh Bajaj

LinkedIn
GitHub

utkarshbajaj@cmu.edu
(650) 705-9949
Mountain View, CA

EDUCATION

Carnegie Mellon University — Mountain View, CA
Master of Science in Software Engineering — Aug 2024 − Dec 2025
Courses: Software Engineering, Computing Systems, Functional Programming

WORK EXPERIENCE

Microsoft — Hyderabad, India
Software Engineer, Azure Automation — Jul 2022 − Jul 2024

- Developed **C# application** to migrate PowerShell 5.1 and Python 3.8 customer scripts from **VM-based monolithic executions to containerized microservices architecture** using **.NET Framework and Docker**
- Enhanced system security by executing scripts in isolated Hyper-V containers, **boosting success rates from 99.8% to 99.99%** by eliminating VM dependencies for over **200M+ monthly Python and PowerShell executions**, resolving customer-reported bugs during the migration process
- Designed and implemented internal **API infrastructure** by configuring localhost within containers and **developed PowerShell cmdlets and Python packages** that enabled customers to retrieve assets (e.g., certificates, credentials) from their Azure accounts
- Collaborated with team to debug and deploy API microservice for external container communication, facilitating expansion into new regions. Initiated **automation of monitoring and continuous deployment scripts, reducing work hours** required for scaling to additional regions and data centers
- Acted as on-call engineer, swiftly addressing and resolving customer-reported incidents (CRIs) and service-related issues, leading to **decrease in service-related calls and enhanced customer satisfaction (CSAT) scores**
- Awarded Culture Champion in Dec 2022 for embodying company's value of fostering a growth mindset

Software Engineering Intern, Azure Automation — Jan 2022 − Jun 2022

- Developed C# application using .NET Core and Docker to enable PowerShell 7.2, Python 3.10 container jobs on Azure Automation, **covering 3000+ lines of code with unit testing for 95%+ test coverage** and robust failure detection
- Achieved significant adoption with **150+ customers successfully running 10,000+ jobs** in preview, paving path for migrating existing Azure Automation runtimes to containers

Tata Consultancy Services — Delhi, India
Data Analytics Intern — May 2021 − Jul 2021

- Mechanized generation of financial statements for 40+ sub-companies using **Python's data wrangling capabilities with pandas and NumPy** to handle and process extensive datasets, **reducing over 1,000 work hours monthly**

PROJECTS

Codeforces Rating Updates — Aug 2021

- Engineered **end-to-end application** that automates the delivery of Codeforces contest rating updates, **utilizing Google Firebase for user data management and AWS EC2 for execution of Python scripts**
- Hosted **user interface, made with HTML, CSS and JavaScript** on Github Pages, application sends email to the user upon rating publication, sparing need for manual checks on Codeforces website

Find IMDB Ratings — Oct 2020

- Created **Python script using 'BeautifulSoup', 'requests', and 'pandas'**, scrapes web for movies and stores data in .csv file for user analysis, at Hacktoberfest 2020, attracted multiple forks and contributions from 5+ individuals on GitHub

SKILLS

- Programming Languages: C#, C, C++, Python, JavaScript, F#
- Databases: MySQL, MongoDB
- Frameworks and Tools: .NET, Docker, Azure, NumPy, pandas, Node.js, Socket.io, Vim, Git

LEADERSHIP/ACHIEVEMENTS

- Chaired ACM Manipal, led a team of 10 to organize national programming competition, TechTatva 2020 with 200+ participants, mentored 5+ juniors in **problem solving through data structures and algorithms using C++**
- Achieved peak **contest rating: 1839** on Leetcode, securing position in **top 7% contestants globally**