Tirtha Kharel

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tirthakharel.com
github.com/tirthakharel

Education

University of Pennsylvania — Philadelphia, PA

B.S.E. in Computer Science; Minors in Data Science & Statistics — *Aug. 2018 - May 2022*

Relevant Coursework: Data Structures & Algorithms, Discrete Mathematics, Computer Architecture, Probability, Statistical Inference, Scalable & Cloud Computing, Databases, Web Programming

Activities: **Penn Engineering Student Activities Council (ESAC)** - Liasion Chair, **Penn Dhamaka (Bollywood/Fusion dance team)** - PR Chair

Experience

Amazon Web Services (AWS) — Seattle, WA (Remote)

Software Development Engineer Intern — *June 2020 - Aug. 2020*

Worked on the EC2 Hibernate team, which is in charge of the hibernate feature on running instances. I created a CLI in Python which allows customers to check hibernation compatibility in their AMIs (OS), create hibernate-compatible AMIs, and run performance tests for hibernation.

University of Pennsylvania CIS — Philadelphia, PA

MCIT 593 Teaching Assistant — *Jan. 2020 - Present*

MCIT 593 Online is a Master's course in Computer Architecture. My duties as TA include holding recitation for students, holding weekly office hour sessions, answering student questions online, and grading assignments.

Research Assistant — *May 2019 - Present*

I am building a data collection website for an EPA-funded research project on lead levels in water around the US. I am also working to improve the ML model that is being used to predict lead in water without performing lab tests.

Select Projects

Photogram

Implemented a lite version of Instagram equipped with posts, likes, comments, follows, direct messages, and secure login/registration built on the MERN stack.

Literature Online

Created an online version of the card game Literature where players can create rooms and play in real time in groups of 6, 8, or 10 people. Created using React.js and deployed on AWS.

Carbon

Created a database visualization web app where users can plan/save car trips, calculate most efficient vehicles, and calculate their carbon footprint. Created using React.js and OracleDB (300k+ rows).

Skills

Proficient

Java, JavaScript, HTML/CSS, React.js, Node.js, Express.js, Git, AWS (EC2, DynamoDB, Lambda, S3)

Intermediate

Python, SQL, C, Unix, Bash, MongoDB, Drupal, Wordpress

Learning

Swift, PHP, Next.js, Gatsby.js, Objective-C