

# MUHAMMAD USMAN SIDDIQUI

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## Education

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**The Pennsylvania State University**

**Expected May 2027**

*Bachelor of Science in Computer Science*

## Experience

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**Software Developer Intern**

**Oct 2025 – Present**

*Libraries Strategic Technologies, The Pennsylvania State University*

*University Park, PA*

- Contributed to an Agile development team building data integration systems for faculty research metadata, participating in sprint planning, daily standups, and retrospectives to deliver incremental features.
- Designed and implemented XML exporters to Activity Insight using DSL schema specifications, enabling automated data mapping for mentorship and committee records across ETDA Workflow and LionPATH systems.
- Built API endpoints for ETDA Workflow to retrieve faculty committee data, implementing authentication via API keys and returning JSON responses to support downstream integration with Activity Insight.

**AI Consultant**

**Aug 2025 – Present**

*IT Learning and Development, The Pennsylvania State University*

*University Park, PA*

- Delivered 80+ AI consultations to faculty and staff across Education, Liberal Arts, and Nursing departments, supporting enterprise AI adoption through tailored guidance on Microsoft Copilot integration in academic workflows.
- Trained directly by Microsoft professionals during Phase 1 on Copilot capabilities; currently in Phase 2 preparing for Google-led training on Gemini, conducting comparative research to guide university AI tool selection.
- Utilized ServiceNow to track consultations and document user feedback, informing Penn State's strategic AI implementation roadmap and curriculum development initiatives.

**HackPSU Organizer (Communications Team)**

**Sep 2025 – Present**

*HackPSU, The Pennsylvania State University*

*University Park, PA*

- Led outreach to 30+ faculty and student organizations across Penn State and nearby universities to increase hackathon attendance.
- Managed reimbursement communication for traveling participants, ensuring seamless attendee experience.

**Consultant Training Program Participant**

**Aug 2025 – Dec 2025**

*Nittany Lion Consulting Group, The Pennsylvania State University*

*University Park, PA*

- Completed competitive consulting training program with instruction from PwC, Deloitte, KPMG, and EY consultants, gaining experience in consulting frameworks, structured communication, and client-ready professionalism.
- Analyzed and presented solutions for individual and team case assignments, developing skills in slide writing, presenting complex ideas clearly, and business problem-solving.
- Advanced through behavioral and case interview rounds, demonstrating consulting readiness and professional communication skills.

## Projects

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**NBA Schedule Difficulty Analysis** | *R, ggplot2, Statistical Modeling, tidyverse*

**Aug 2025**

- Analyzed 24,000+ NBA games across 10 seasons (2014-2024) to quantify scheduling inequities, processing complex temporal data including COVID-disrupted seasons with varying game counts and intricate scheduling patterns.
- Developed composite metrics incorporating opponent strength ratings, travel burden calculations, and rest pattern analysis using rolling window functions to identify compressed scheduling periods (4 games in 6 nights).
- Revealed significant inequities showing some teams gained 60+ wins while others lost nearly 100 wins due purely to schedule factors over five seasons, delivering actionable insights for strategic planning and coaching decisions.

**Data-Driven Movie Recommendation Platform** | *Python, pandas, matplotlib*

**Jul 2025**

- Built a recommendation system using collaborative filtering to generate personalized suggestions for 30+ users.
- Developed a data pipeline merging TSV and CSV datasets, applying cleaning and validation processes to improve accuracy.
- Created visualizations to highlight rating distributions and user behavior trends.

## Technical Skills

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**Programming & Databases:** Python, R, SQL, Java, C++, Golang, JavaScript, HTML/CSS

**Data Analytics & Visualization:** Statistical Modeling, Power BI, Tableau, ggplot2, matplotlib, seaborn, NumPy, pandas

**AI & Automation:** Prompt Engineering, AI Agents (Microsoft Copilot), Flask, FastAPI, Beautiful Soup

**Frameworks & Development:** React, Material-UI, WordPress, PyTorch, TensorFlow, Ruby on Rails

**Languages:** English (fluent), Urdu (fluent), Arabic (limited proficiency)

**Interests:** Fitness, Cricket, Food Tours, PlayStation Trophy Hunting