S M Afnan Haider

Software Engineering Intern | Backend & ML Systems

Python, JavaScript, Java, Django, React, PostgreSQL, AWS

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Education

Bachelor of Science in Computer Science and Data Science, *Rutgers University, New Brunswick, NJ* **3.95**/4.00 Expected Dec 2027
Accelerated Graduation Track
Honors: Data 101 Hall of Fame — 1st, Vapnik Challenge; 4th, Quinlan Cup (240 students), predictive modeling and pattern discovery (R)
Relevant Courses (all A): Data Structures, Computer Algorithms, Introduction to AI, Computer Architecture, Statistical Inference, Data Management for Data Science (Databases)

Work Experience

Undergraduate Part-Time Lecturer (PTL) — Data Science **Sep 2025 - May 2026**
Department of Computer Science *Rutgers University, New Brunswick, New Jersey, USA*

- Selected as an **undergrad PTL**, leading recitations and a full-class guest lecture for **250+ students** alongside faculty and graduate TAs.
- Pioneered **CodeBench** as the **first PTL** to use it in instruction and grading; built coding exercises, projects, and course materials.
- Mentored students through **office hours and exam prep** while supporting grading and improvements to **curriculum and assessments**.

Lab Supervisor **Sep 2024 - Present**
Office of Information Technology (OIT) *Rutgers University, New Brunswick, New Jersey, USA*

- Supervise student lab consultants in a **200+ member**, four-campus OIT operation; **reviewed 500+ applicants** and **onboarded 50+ hires.**
- Resolve **25+ technical requests daily** at a **95% first-contact success rate** using **ServiceNow, Icinga, Bomgar, and PaperCut**.
- Built an **AI agent** that automates consultant quality reviews across **50+ ServiceNow tickets/week**, saving **~5 hours/week**.

Student Community Manager **Jun 2026 - Present**
Coding and Social Lounge (CSL), Department of Computer Science *Rutgers University, New Brunswick, New Jersey, USA*

- Tutoring **15 students/week in Java** on **data structures and algorithms**, from recursion and linked lists to trees and sorting.
- Creating **Intro to CS study guides for 400+ students/semester**, simplifying core programming concepts into concise learning resources.
- Co-hosting **ScarletLabs**, a SWE accelerator with **industry mentorship**, **Agile sprints in Jira**, and a **PR + code review** workflow.
- Organizing **alumni career panels** connecting students with industry professionals on **internships, career paths, and recruiting**.

Relevant Projects

ServiceNow RAG Assistant - *reads IT tickets and suggests cited resolution steps* **smafnanhaider.com/projects/servicenow-rag-assistant**
Technologies: *Python, FastAPI, RAG, Sentence Transformers, BGE, DeepSeek API, JavaScript, Docker, AWS*

- Built and deployed for the **Rutgers OIT help desk**, surfacing suggestions **directly inside ServiceNow** with **source citations**.
- Achieved a **94.5% top-5 hit rate** and **0.845 MRR** over **1,394 KB articles** using **category-aware BGE retrieval**.
- Designed **SUPPORTED/INFERRED/UNCERTAIN grounding** with **insufficient-evidence abstention** to block unsupported suggestions.
- Cut **response time 41% (17 to 10 min)** across a **50-ticket beta test**; added **client-side PII redaction** and Docker/AWS deployment.

ProfIQ - *AI-powered professor analytics and recommendations from student reviews* **smafnanhaider.com/projects/profiq**
Technologies: *Python, Django, React, PostgreSQL, PyTorch, scikit-learn, Hugging Face, MiniLM*

- Built the **Django REST + React** app with professor search, comparisons, and recommendations, covered by **70 automated tests**.
- Wrote a **resumable RateMyProfessors GraphQL ETL** with paging, checkpointing, and deduplication over **1.7M+ professor records**.
- Reached **80.2% accuracy / 0.72 macro-F1** classifying **350K+ reviews** with a **TF-IDF + logistic regression** model on star-rating labels.
- Built a **"similar professors" recommender** with **MiniLM embeddings**; top-5 matches share a department **~7x more often than random**.

UCL Match Forecasting - *predicts Champions League match outcomes* **smafnanhaider.com/projects/ucl-match-forecasting**
Technologies: *Python, pandas, scikit-learn, SQLite, Logistic Regression, Statistical Modeling*

- Unified **5 external data sources** into a leak-safe pipeline with **Elo, form, xG, and rest/congestion** features across **966 UCL fixtures**.
- Beat the **47.4% base rate** by **12.4 pts** (**59.8% accuracy**) with a **football-only logistic model**, within **2.4 pts of the closing odds model**.
- Hit **74–79% accuracy** on the **17–24% most confident fixtures** via **temperature-scaled, Wilson-gated policies** that abstain on the rest.
- Built an **append-only SQLite forecast ledger** that freezes pre-kickoff predictions for **leak-proof live evaluation and reproducibility**.

Skills

Languages: Python, Java, JavaScript, TypeScript, C, R, SQL, HTML/CSS, JSON
Frameworks & Libraries: Django REST Framework, Next.js, Node.js, FastAPI, React, PyTorch, scikit-learn, Hugging Face, pandas, NumPy
Databases & Data: PostgreSQL, MySQL, SQLite, MongoDB, Firebase (NoSQL), Tableau, Power BI, Jupyter
Cloud & DevOps: AWS (EC2, IAM, SSM), GCP, Docker, CI/CD, Git/GitHub, Vercel *(pursuing AWS Certified Developer – Associate, Nov 2026)*
Testing & Network Tools: pytest, Selenium, Wireshark, Nmap
Artificial Intelligence, Machine Learning & Tools: LLMs, RAG, Prompt Engineering, Natural Language Processing, Semantic Search, ETL
Concepts: Object-Oriented Programming, Full-Stack Development, RESTful API Design, Automated Testing, Agile/Scrum, Debugging