

# Afham Bashir

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## Software Engineer

Full stack developer in both front-end and back-end based programming utilizing NodeJs, Express, Bootstrap, MongoDB, Atlas, JavaScript, HTML, CSS. I also have experience with C, mentoring or tutoring comp sci students, alongside data analysis using Gaussian statistics in excel & RStudio.

### SKILLS

NodeJs, Express, Bootstrap, NoSQL, Mongo, Atlas, HTML, CSS, Javascript, Flexbox, Rest, NPM, Ajax, JSON, Authentication, Authorization, Passport, Cookies & Sessions.  
C++, Data Structures & Algorithms. x86 Assembly language.  
Excel Analysis Toolpak & Power Query. RStudio & RCloud Statistics. Database entry.  
Fluent in Urdu, Punjabi. Conversational level in Hindi.

### TECHNICAL PROJECTS

#### SpaceGrounds - [Github](#) | [Demo](#)

Registered Users can leave reviews and add spots they found for stargazing, for people trying to find low light polluted areas to use for astrophotography, telescopes, or watching meteor showers.

- Utilized Mongo Atlas to store encrypted user information, their sessions, alongside the database of user submitted SpaceGrounds.
- Integrated Authorization using sessions, login authentication, and encryption (hash&salt) using Passport.
- Use Cloudinary Api to allow users to upload and delete images.
- Use MapBox Api, accessed with a MapBox token, to parse GeoJSON. And to create an interactive map for users to visualize user submitted SpaceGround locations.
- Created both Client-side and server-side input validations.
- Setting up Helmet Content Security Policy, Joi html sanitize, & Mongo sanitize to deter against basic Mongo Injection, SQL injection, and Cross-Site Scripting attacks.

#### af-ham.com - [Github](#) | [Demo](#)

A front-end website with a few CSS animations used to display a brief portfolio of my work.

- Used Bootstrap classes, alongside flexbox to create a responsive desktop webpage.

### EXPERIENCE

#### Northampton Community College Learning Center

Bethlehem, PA

STEM, Math, & C++ Tutor

08/2020 - Present

- Taught students in Calc (1-3), Physics 1 & 2, Statics for Engineers, Statistics, RCloud, Excel Stats for Business, Organic chemistry, Gen Chem, Discrete Mathematics. Was regularly booked out by students for online appointments.
- Reviewed Study guides with students, in group settings.
- Reviewed code in C++, guiding new comp sci students in creating outlines for their solutions to their programming assignments, alongside debugging.

#### National Science Fund Cybersecurity Grant

Bethlehem, PA

Peer Mentor

08/2020 - 05/2021

- Guided my peers concentrating on comp sci during the online transition as a result of the pandemic. Reviewed academic plans, provided coding tools and resources, being an outlet for students to also communicate throughout their semester informally.
- Consulted by students finishing their requirements for their A.S in comp sci, alongside incoming students, and even remote international students.

#### FEG Kalahari

Mount Pocono,, PA

Attendant and Inventory

11/2018 - 05/2021

- Fixed technical and software issues with arcade machines, in addition to managing and entering inventory of weekly shipments from the resort's warehouse to their store.

#### Liberty Science Center

Jersey City, NJ

Intern

08/2016 - 05/2017

- Engaging with visitors on educational exhibits as floor staff and often working to guide large groups and crowds through the exhibits and shows while providing relevant insight. Nominated for Patrice Connelly Memorial Award.

### EDUCATION

#### Columbia University School of General Studies

New York, NY

B.A in AstroPhysics

09/ 2022 - present

#### Northampton Community College.

Bethlehem, PA

A.S with Honors in Computer Science

05/ 2021

A.S with Honors in Physics & Mathematics

05/2020