U.S. Embassy Islamabad
Immigrant Visa Unit

Case Number: 123123
Applicant: Taha
Interview Date: 2222-02-22

RE: Submission of Additional Documents in Response to 221(g) Refusal

Dear Consular Officer,

I am respectfully submitting the additional documents requested in the 221(g) letter issued after my

immigrant visa interview on 2222-02-22.
The following documents are included:
1. Federal Tax Transcripts (last 3 years)
2. Employment Verification Letter
3. Recent Pay Stubs (last 6 months)
4. Bank Statements (if showing significant assets)
5. Asset Documentation (if relying on assets)
6. Cover Letter
7. Document Checklist
8. Certified Translations (if needed)

I have reviewed each document for completeness, proper certification, and English translations

where required. All are originals or certified copies as specified.
Submission Method: I am using the designated courier service as instructed in the 221(g) letter and

have retained the tracking receipt.
Please contact me at the email or phone number provided in my original application if further

information is needed.
Thank you for your time and consideration.

Respectfully submitted,

Taha
Case Number: 123123
Date: January 15, 2026

DOCUMENT INDEX

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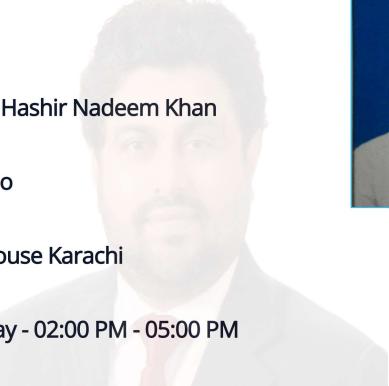8. Certified Translations (if needed)

Total Documents: 8
Submitted by: Taha
Case Number: 123123
Date: January 15, 2026

Name: Muhammad Hashir Nadeem Khan
Roll No: 00068257
Distance learning: No
City: Karachi
Center: Governer House Karachi
Campus: Main
Days / Time: Saturday - 02:00 PM - 05:00 PM
Batch 1

Q4

Authorized Signature

Governor Sindh
Kamran Khan
Tessori's Initiative for
Artificial Intelligence,
Web 3.0 & Metaverse

Q4

Project Analysis Summary

Arachnie ek comprehensive immigration visa assistance application hai jo:

- US immigration forms (I-130, I-864) auto-fill karta hai
- Passport photos generate karta hai
- Visa status check karta hai
- AI-powered immigration assistance provide karta hai
- PDF processing aur editing support karta hai

Current Tech Stack:

- **Frontend**: Next.js 15 + React 19 + TypeScript
- **Backend**: Python FastAPI
- **Current Auth**: Supabase (with localStorage fallback)
- **Vector DB**: Qdrant Cloud (AI knowledge base ke liye)

DATABASE OPTIONS - Detailed Analysis

1. Supabase (PostgreSQL) - RECOMMENDED

Feature	Details
Type	PostgreSQL (Relational) + Realtime + Storage
Hosting	Fully Managed Cloud

Pricing:

Plan	Price	Database Size	Storage	Bandwidth
Free	$0/month	500 MB	1 GB	2 GB
Pro	$25/month	8 GB	100 GB	250 GB
Team	$599/month	Unlimited	500 GB	Unlimited
Enterprise	Custom	Unlimited	Unlimited	Unlimited

Pros:

- Built-in authentication (Email, Google, Apple, GitHub, etc.)
- Real-time subscriptions out of the box
- Row Level Security (RLS) - data isolation per user
- PostgreSQL ki full power (JSON, Full-text search, PostGIS)
- Instant REST & GraphQL APIs automatically
- Storage bucket for files (PDFs, images)
- Edge Functions (serverless)
- Free tier kaafi generous hai (500 MB database)
- Next.js ke saath seamless integration
- Open source - koi vendor lock-in nahi

Cons:

- Complex queries mein learning curve
- Free tier mein 2 projects limit
- Paused projects after 1 week inactivity (free tier)
- Pricing jump from Free to Pro is significant ($0 → $25)

Best For Your Project Because:

- Immigration forms ka structured data (users, applications, documents)
- User profiles aur form submissions ke liye perfect
- Built-in auth solve karta hai authentication problem
- File storage for passport photos aur PDFs

2. Firebase (Firestore + Realtime DB)

Feature	Details
Type	NoSQL Document Database
Hosting	Google Cloud Managed

Pricing:

Resource	Free Tier	Pay-as-you-go
Storage	1 GB	$0.18/GB/month
Document Reads	50K/day	$0.036/100K reads
Document Writes	20K/day	$0.108/100K writes
Document Deletes	20K/day	$0.012/100K deletes
Network Egress	10 GB/month	$0.12/GB

Pros:

- NoSQL hai toh flexible schema
- Real-time sync excellent
- Firebase Auth bahut mature hai
- Mobile SDKs best-in-class
- Google Cloud ecosystem
- Offline support built-in
- Analytics integration
- Cloud Functions (serverless)

Cons:

- Vendor lock-in (Google)
- Complex queries limited (no joins)
- Pricing unpredictable - usage based
- Immigration forms ke structured data ke liye less ideal
- Migration out of Firebase mushkil hai
- Firestore billing surprises common

Why Not Ideal for Arachnie:

- Immigration forms highly structured hain (I-130 has 100+ fields)
- Complex queries chahiye (visa status by category, date ranges)
- NoSQL schema-less approach forms ke liye risky

3. MongoDB Atlas

Feature	Details
Type	NoSQL Document Database
Hosting	Multi-cloud (AWS, GCP, Azure)

Pricing:

Plan	Price	Storage	RAM

Plan	Price	Storage	RAM
Free (M0)	$0/month	512 MB	Shared
Serverless	$0.10/million reads	Auto-scale	Auto
Dedicated (M10)	$57/month	10 GB	2 GB
Dedicated (M30)	$215/month	40 GB	8 GB

Pros:

- Document model immigration forms ke liye achha
- Flexible schema - forms evolve ho sakti hain
- Aggregation pipeline powerful
- Atlas Search (full-text built-in)
- Multi-cloud support
- Time-series data support
- Change streams for real-time
- Mongoose (Node.js) mature hai

Cons:

- Transactions limited (multi-document)
- Auth solution separate chahiye
- Memory usage zyada
- Complex joins expensive
- Free tier sirf 512 MB
- $57 jump to dedicated

Consideration for Arachnie:

- Forms as documents achha hai
- But auth alag implement karna padega
- Python ke saath PyMongo use karna hoga

4. PlanetScale (MySQL)

Feature	Details
Type	MySQL (Serverless)
Hosting	Vitess-powered, Multi-cloud

Pricing:

Plan	Price	Storage	Reads	Writes
Hobby	$0/month	5 GB	1 billion/mo	10 million/mo
Scaler	$29/month	10 GB	100 billion/mo	50 million/mo
Scaler Pro	$39/month	10 GB	150 billion/mo	75 million/mo
Enterprise	Custom	Unlimited	Unlimited	Unlimited

Pros:

- Branching (database branches like git)
- Zero-downtime schema changes
- Serverless - auto-scaling
- MySQL compatible (wide ecosystem)
- Non-blocking schema migrations
- Generous free tier (5 GB!)
- Prisma integration excellent
- Read replicas built-in

Cons:

- No foreign keys (by design - Vitess limitation)
- Auth solution separate chahiye
- Row-level security nahi hai
- Real-time subscriptions nahi
- MySQL specific syntax
- Less flexible than NoSQL

Why Good But Not Best:

- No foreign keys problematic for form relationships
- Auth separately implement karna padega
- Real-time features ke liye extra work

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5. Neon (Serverless PostgreSQL)

Feature	Details
Type	PostgreSQL (Serverless)
Hosting	AWS-based

Pricing:

Plan	Price	Compute	Storage	Projects
Free	$0/month	0.25 vCPU	512 MB	1
Launch	$19/month	1 vCPU	10 GB	10
Scale	$69/month	4 vCPU	50 GB	50
Business	$700/month	8+ vCPU	500 GB	Unlimited

Pros:

- Full PostgreSQL compatibility
- Serverless - scales to zero
- Branching like PlanetScale
- Instant database provisioning
- Autoscaling compute
- Point-in-time recovery
- Vercel integration native

Cons:

- Auth separately chahiye
- Free tier bahut limited (512 MB)
- Cold starts possible
- Newer player, less mature
- Real-time nahi hai built-in
- File storage nahi hai

Comparison with Supabase:

- Neon sirf database hai
- Supabase full BaaS hai (Auth + Storage + Realtime)

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6. AWS DynamoDB

Feature	Details
Type	NoSQL Key-Value/Document
Hosting	AWS Managed

Pricing:

Resource	On-Demand	Provisioned
Write Request	$1.25/million	$0.00065/WCU/hour
Read Request	$0.25/million	$0.00013/RCU/hour
Storage	$0.25/GB/month	$0.25/GB/month
Free Tier	25 GB + 25 WCU + 25 RCU	Same

Pros:

- Infinite scale
- Single-digit millisecond latency
- AWS ecosystem integration
- Global tables (multi-region)
- DynamoDB Streams (change data capture)
- Pay-per-request option
- Auto-scaling

Cons:

- Query patterns fixed at design time
- Complex access patterns mushkil
- No joins, limited queries
- Steep learning curve
- AWS vendor lock-in
- GSI/LSI planning required
- Cost unpredictable at scale

Why Not Recommended:

- Immigration forms ke complex queries ke liye unsuitable
- Access patterns plan karna mushkil
- Over-engineered for your use case

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7. Appwrite

Feature	Details
Type	Open Source BaaS
Hosting	Self-hosted or Cloud

Pricing (Cloud):

Plan	Price	Bandwidth	Storage	Users
Free	$0/month	10 GB	2 GB	75,000
Pro	$15/month	300 GB	150 GB	Unlimited
Scale	$599/month	Unlimited	Unlimited	Unlimited

Pros:

- Open source (self-host free)
- Built-in auth (50+ providers)
- File storage included
- Realtime database
- Functions (serverless)
- REST & GraphQL APIs
- Privacy-focused
- Cheaper than Firebase

Cons:

- Less mature than Supabase/Firebase
- Smaller community
- Self-hosting complex
- Limited ecosystem
- Documentation gaps
- Performance at scale unproven

Consideration:

- Good alternative but Supabase more mature
- Self-hosting option attractive for data privacy

AUTHENTICATION OPTIONS - Detailed Analysis

1. Supabase Auth - RECOMMENDED (Database ke saath)

Pricing:

- **Free**: 50,000 MAU (Monthly Active Users)
- **Pro**: 100,000 MAU included, then $0.00325/MAU
- **Team**: Unlimited

Features:

Feature	Available
Email/Password	Yes
Magic Link	Yes
Google OAuth	Yes
Apple OAuth	Yes
GitHub OAuth	Yes
Phone OTP	Yes (paid)
SAML SSO	Pro+
MFA/2FA	Yes
Row Level Security	Yes
Custom Claims	Yes
Session Management	Yes

Pros:

- Database ke saath integrated
- RLS (Row Level Security) - user data isolation
- No separate service needed
- 50K MAU free - bahut generous
- Self-hosted option available
- JWT tokens standard
- Real-time auth state

Cons:

- Supabase ecosystem mein locked (if you leave Supabase)
- Custom flows ke liye learning curve
- Phone auth paid hai

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2. Clerk

Pricing:

Plan	Price	MAU	Features
Free	$0/month	10,000	Basic auth
Pro	$25/month	10,000 included	+ $0.02/MAU after
Enterprise	Custom	Unlimited	SSO, Support

Features:

Feature	Available
Pre-built UI Components	Yes
Email/Password	Yes
Social OAuth (10+)	Yes
Magic Link	Yes
Phone OTP	Yes
Multi-session	Yes
MFA/2FA	Yes
Organizations	Yes
Webhooks	Yes
User Management Dashboard	Yes

Pros:

- Beautiful pre-built components
- Drop-in UI ready to use
- Organizations/Teams support
- Next.js native integration
- Best DX (Developer Experience)
- Session management advanced
- User impersonation
- Webhook events

Cons:

- 10K MAU free (Supabase 50K)
- $25/month + per MAU costly
- Vendor lock-in strong
- Database separately chahiye
- Cannot self-host

Your Project Context:

- Aapke code mein Clerk configured hai but commented out
- Supabase primary chal raha hai
- Clerk use karein to $25/month extra

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3. Auth0

Pricing:

Plan	Price	MAU
Free	$0/month	7,500

Essentials	$95/month	500 base
Professional	$240/month	1,000 base
Enterprise	Custom	Unlimited

Pros:

- Most mature auth provider
- Enterprise features (SSO, SAML, LDAP)
- Extensive documentation
- Universal Login (customizable)
- Machine-to-machine auth
- Fine-grained permissions
- Compliance (SOC2, HIPAA)

Cons:

- Pricing complex aur expensive
- 7.5K MAU free (lowest)
- Overkill for MVP
- Configuration complex
- Slow dashboard

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4. Firebase Auth

Pricing:

Plan	Price	Features
Spark (Free)	$0	10K verifications/month (phone)
Blaze (Pay-as-you-go)	Phone: $0.01/verification	$0.06/verification after 10K

Features:

- Email/Password
- Google, Apple, Facebook, Twitter OAuth
- Phone OTP
- Anonymous auth
- Custom tokens
- Multi-factor auth

Pros:

- Effectively free for most apps
- Google ecosystem integration
- Mobile SDKs excellent
- Anonymous auth useful
- Good documentation

Cons:

- Firebase ecosystem mein lock-in
- Limited customization
- No organizations/teams
- Database alag chahiye (if not using Firestore)

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5. NextAuth.js (Auth.js)

Pricing: FREE (Open Source)

Features:

- 50+ OAuth providers
- Email/Password
- Magic Links

- Database adapters (Prisma, Drizzle, etc.)
- JWT or Database sessions
- Callbacks for customization

Pros:

- Completely free
- Full control
- Any database use kar sakte ho
- No vendor lock-in
- Active community
- TypeScript support

Cons:

- Setup yourself karna padega
- No pre-built UI
- Security responsibility yours
- Session management manual
- No admin dashboard
- Maintenance overhead

COMPARISON TABLE - All Databases

Database	Type	Free Tier	Starting Paid	Auth Built-in	Real-time	Best For
Supabase	PostgreSQL	500 MB	$25/mo	Yes	Yes	Full-stack apps
Firebase	NoSQL	1 GB	Pay-per-use	Yes	Yes	Mobile apps
MongoDB	NoSQL	512 MB	$57/mo	No	Yes	Flexible data
PlanetScale	MySQL	5 GB	$29/mo	No	No	Scalable MySQL
Neon	PostgreSQL	512 MB	$19/mo	No	No	Serverless Postgres
DynamoDB	NoSQL	25 GB	Pay-per-use	No	Yes	AWS apps
Appwrite	Multi	2 GB	$15/mo	Yes	Yes	Privacy-focused

COMPARISON TABLE - All Auth Providers

Provider	Free MAU	Paid Starting	Pre-built UI	Best For
Supabase Auth	50,000	Included in Pro	No	Supabase users
Clerk	10,000	$25/mo	Yes	Best DX
Auth0	7,500	$35/mo	Yes	Enterprise
Firebase Auth	Unlimited*	$0.01/verification	No	Google ecosystem
NextAuth.js	Unlimited	Free	No	Full control

*Firebase Auth free except phone verification

FINAL RECOMMENDATION

Database: Supabase

Reasons:

1. **Perfect Fit**: Immigration forms structured data ke liye PostgreSQL ideal hai
2. **All-in-One**: Auth + Database + Storage + Realtime ek jagah
3. **Free Tier**: 500 MB + 50K MAU - MVP ke liye kaafi
4. **Already Setup**: project mein already configured hai
5. **File Storage**: Passport photos aur PDFs ke liye bucket
6. **Row Level Security**: User data isolation automatic
7. **Real-time**: Visa status updates live possible
8. **No Vendor Lock-in**: PostgreSQL standard, migrate kar sakte ho

Authentication: Supabase Auth

Reasons:

1. **Integrated**: Database ke saath tightly coupled
2. **Free**: 50,000 MAU - most generous free tier
3. **RLS Integration**: Auth + Authorization combined
4. **Social Login**: Google, Apple, GitHub ready
5. **Already Working**: Aapke code mein implemented hai
6. **MFA Support**: 2-factor authentication available

Cost Estimation (Monthly)

Free Tier (MVP Phase):

Service	Cost
Supabase Free	$0
Qdrant Free	$0
Vercel Free	$0
Total	**$0/month**

Growth Phase (1,000+ users):

Service	Cost
Supabase Pro	$25
Qdrant Starter	$25
Vercel Pro	$20
Total	**$70/month**

Scale Phase (10,000+ users):

Service	Cost
Supabase Pro + Usage	~$50-100
Qdrant Growth	~$100
Vercel Pro	$20
Total	**$170-220/month**

Why NOT Other Options?

Firebase:

- NoSQL structured immigration forms ke liye less ideal

- Pricing unpredictable
- Vendor lock-in severe

MongoDB:

- Auth separately implement karna padega
- Complex joins expensive
- $57 jump to dedicated

PlanetScale:

- No foreign keys (form relationships ke liye problem)
- Auth separately chahiye
- Real-time nahi hai

Clerk (for Auth):

- Extra $25/month when Supabase Auth free
- Less MAU free (10K vs 50K)
- Database separately needed anyway

Conclusion

Supabase is the **BEST choice** for Arachnie because:

1. **Cost Effective**: Free tier se shuru, gradual scaling
2. **Feature Complete**: Auth + DB + Storage + Realtime
3. **Immigration Data Friendly**: PostgreSQL structured forms ke liye perfect
4. **Already Integrated**: Minimal changes required
5. **Future Proof**: Open source, no vendor lock-in
6. **Developer Experience**: Excellent documentation, large community

Sirf ensure karein:

- Proper RLS policies set hain
- Storage buckets configured hain
- Environment variables production mein secure hain
- Database schema optimized hai

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n Visa Assistance Application*