



Full-stack Developer (AI/ML focus):

Job Requisition id: R000521

Location: India, Remote

Job Type: Contract, Part-time

Job Description:

About the Role:

We're seeking a versatile Full Stack Developer to build and scale our donor intelligence platform. You'll work across the entire stack—React frontend, Python/Flask backend, and AI/ML integrations—turning complex data analytics into intuitive tools that plasma collection centers use daily.

This isn't just maintenance work. You'll architect new features, optimize AI workflows, and solve hard technical problems in a high-impact healthcare domain. If you're energized by the intersection of data, AI, and real-world operational challenges, this role is for you.

About CentroidAI:

CentroidAI LLC is a technology and data analytics company. We operate in startup mode EVERYDAY. We are passionate about healthcare, and our mission is to bring life-saving immune-deficiency therapies to patients that need it most. We solve the problem of not enough plasma collections, using sharp data analytics, AI solutions and innovative approaches.

At CentroidAI, we understand the fatigue around empty AI promises. Unlike the many companies that use “AI” as a label without delivering real value, we are building a genuine AI platform grounded in domain expertise and operational impact. Our startup mindset drives us to focus relentlessly on delivering measurable business outcomes—turning advanced technology into practical tools that solve today’s toughest challenges for our customers. We put value first, because for us, AI is about results, not hype.

CentroidAI is passionate about; our employees and contractors, customers and the value/quality of our solutions. These are manifested in our four corporate values as follows:

- 1. People-First**

We treat our team as our primary advantage, creating a high-trust, low-ego



environment where people can learn fast, take smart risks, and do the best work of their careers. Happy employees will take care of our customers, and always do the right thing.

2. **Customer Delight**

We will make our customers wildly successful in raising their donations at a much lower cost; ultimately benefiting patients; this is in line with our vision. The customer puts food on our table (Mahatma Gandhi) and without customers we would not exist.

3. **Patient-Impact**

Our purpose is to solve real problems for patients and clinicians, and we prioritize work that moves the needle on access, outcomes, and affordability. Everything that we do has to keep the patient's outcome front and center.

4. **Futuristic R&D**

We push the boundaries of science and AI like a scrappy lab, rapidly testing bold ideas and turning them into practical tools before bigger players even notice the opportunity. At our core, we are a technology company that brings business value from data.

5. **Integrity**

We will always do the right thing, at all times. We abide by regulations, stay honest, fulfil contractual obligations and respect the letter of the law. Without discrimination – whether with employees, customers, patients, partners or whoever. It will be noticeable.

Key Responsibilities:

Application Development (60%)

- Design and build full-stack features using React (frontend) and Flask/Python (backend)
- Implement AI-powered document processing using LangChain, OpenAI APIs, and vector databases
- Create RESTful APIs and integrate with cloud services (Google Cloud Platform)
- Build responsive, user-friendly interfaces using Material-UI and modern React patterns
- Develop donor analytics dashboards and data visualization components
- Design and optimize database schemas using SQLAlchemy (SQLite → PostgreSQL migration)



AI/ML Integration & Optimization (25%)

- Implement RAG (Retrieval Augmented Generation) workflows for document intelligence
- Fine-tune and optimize GPT-4 prompts for donor insights and recommendations
- Build and maintain vector embedding pipelines for semantic search
- Work with LangChain components (document loaders, text splitters, retrievers, chains)
- Optimize AI response quality, token usage, and cost efficiency
- Explore and integrate emerging AI models and capabilities

DevOps & Infrastructure (10%)

- Deploy and maintain applications using Docker and Docker Compose
- Configure Nginx reverse proxy and manage cloud infrastructure (GCP)
- Implement CI/CD pipelines for automated testing and deployment
- Monitor performance, optimize resource usage, and ensure application security
- Manage backups, disaster recovery, and production incident response

Collaboration & Support (5%)

- Debug and resolve production issues efficiently
- Participate in code reviews and maintain engineering standards
- Write technical documentation for features, APIs, and architecture
- Provide occasional technical support to internal users
- Collaborate with product team on feature prioritization and scoping

Required Skills & Qualifications:

Frontend Development

- 2+ years of React.js experience (Hooks, Context API, React Router)
- Proficiency with Material-UI (MUI) or similar component libraries
- Strong JavaScript (ES6+) and responsive design skills
- Experience with state management (Context, Redux, Zustand)
- HTTP clients (Axios, Fetch) and API integration

Backend Development

- 3+ years of Python programming experience
- Flask framework expertise (Blueprints, middleware, error handling)
- SQLAlchemy ORM and relational database design
- RESTful API design and authentication (JWT, session management)
- File handling and document processing (PDF, DOCX, CSV, Excel)
- Understanding of CORS, security best practices, API rate limiting

AI/ML Technologies

- Hands-on experience with OpenAI API (GPT-4, embeddings, function calling)



- LangChain framework (or similar RAG frameworks)
- Vector databases (FAISS, Chroma, Pinecone, or equivalent)
- Understanding of prompt engineering and LLM optimization
- Experience with document processing libraries (PyPDF2, python-docx, mammoth)
- Familiarity with embeddings, semantic search, and similarity algorithms

Database & Cloud

- SQL proficiency (SQLite, PostgreSQL, or MySQL)
- Database migrations, indexing, and query optimization
- Google Cloud Platform (GCS, Secret Manager, Compute Engine) or AWS equivalent
- Understanding of cloud storage patterns and cost optimization

DevOps & Tools

- Docker and containerization
- Linux/Unix command line proficiency
- Git version control and collaborative workflows
- Process managers (Gunicorn, PM2, systemd)
- Basic Nginx or Apache configuration

General Requirements

- Bachelor's degree in Computer Science or equivalent practical experience
- 3-6 years of professional software development experience
- Strong problem-solving and debugging skills across the full stack
- Self-directed and comfortable working with minimal oversight
- Excellent written communication (for remote collaboration)
- Startup mindset: fast, resourceful, comfortable with ambiguity

Preferred Qualifications (Nice to Have):

Healthcare/Domain Knowledge

- Healthcare or life sciences industry experience
- Understanding of plasma donation, blood banking, or clinical workflows
- Familiarity with HIPAA, PHI handling, or healthcare data compliance
- Experience with donor management systems or similar operational software

Advanced Technical Skills

- TypeScript experience
- PostgreSQL or other production-grade databases
- Redis for caching or session management
- Celery or similar task queue systems
- Elasticsearch or full-text search technologies
- Experience with LangSmith or LangChain debugging tools



- Streaming responses from LLMs
- Cost optimization strategies for AI APIs

Engineering Practices

- Test-driven development (pytest, Jest, React Testing Library)
- CI/CD pipelines (GitHub Actions, GitLab CI)
- Monitoring tools (Sentry, DataDog, New Relic)
- Contributions to open-source projects (especially AI/ML related)
- Experience migrating monolithic apps to microservices
- Performance profiling and optimization

Soft Skills

- Experience working in cross-functional teams
- Ability to explain technical concepts to non-technical stakeholders
- Agile/Scrum methodology experience
- Comfortable presenting work and receiving feedback

Compensation & Benefits:

This is a contractor position and therefore not eligible for company benefits, which are for our full and part-time employees only.

Full compensation for this role is in the form of a single, market-driven hourly rate, depending on experience and location. We're transparent about compensation and will discuss specific rates during the interview process.

Work Environment:

- Fully remote with flexible hours (some overlap with US timezones preferred)
- Startup culture: high autonomy, direct impact, fast-paced
- Access to latest AI tools and technologies
- Opportunity to work on cutting-edge AI applications in healthcare

Growth Opportunities:

- Potential equity participation as company grows
- Leadership opportunities as team expands
- Exposure to enterprise customers and deployment at scale
- Professional development budget for courses, conferences, tools

Equal Employment Opportunity:

CentroidAI LLC is an equal opportunity/affirmative action employer that evaluates qualified applicants without regard to age, ancestry, color, religious creed, disability,



marital status, medical condition, genetic information, military or veteran status, national origin, race, sex, gender, gender identity, gender expression and sexual orientation or any other protected factor. We consider qualified applicants consistent with legal requirements.

How to apply:

Please email your latest resume, along with a cover letter explaining how you can make a difference at CentroidAI, to careers@centroid-ai.com.

Please include your email, job requisition id, expected hourly rate and your likely start date.