Student Opportunities Portal - API Documentation

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Base URL

```
Production: https://your-backend.onrender.com/api
Development: http://localhost:5000/api
```

1. Authentication Endpoints

POST /auth/register

Register a new user account.

Request Body:

```
{
  "firstName": "John",
  "lastName": "Doe",
  "email": "john@example.com",
  "password": "SecurePass123!",
  "phone": "0123456789",
  "dateOfBirth": "2000-01-01"
}
```

Response: `201 Created`

```
{
  "token": "jwt_token_here",
  "user": {
    "_id": "user_id",
    "firstName": "John",
    "lastName": "Doe",
    "email": "john@example.com",
    "isAdmin": false
  }
}
```

POST /auth/login

Login with email and password.

Request Body:

```
{
  "email": "john@example.com",
  "password": "SecurePass123!"
}
```

Response: `200 OK`

```json
{
  "token": "jwt_token_here",
  "user": {
    "_id": "user_id",
    "firstName": "John",
    "lastName": "Doe",
    "email": "john@example.com",
    "isAdmin": false
  }
}
```

GET /auth/me

Get current logged-in user details.

Headers:

```
Authorization: Bearer {token}
```

Response: `200 OK`

```json
{
  "_id": "user_id",
  "firstName": "John",
  "lastName": "Doe",
  "email": "john@example.com",
  "phone": "0123456789",
  "isAdmin": false,
  "education": {...},
  "address": {...}
}
```

2. User Profile Endpoints

GET /profile

Get user profile with education and address.

Headers:

```
Authorization: Bearer {token}
```

Response: `200 OK`

```json
{
  "user": {
    "_id": "user_id",
```

```
    "firstName": "John",
    "lastName": "Doe",
    "email": "john@example.com",
    "education": {
      "institution": "University of Cape Town",
      "qualification": "Bachelor's Degree",
      "fieldOfStudy": "Computer Science",
      "yearOfStudy": 3,
      "averageMarks": 75
    },
    "address": {
      "street": "123 Main St",
      "city": "Cape Town",
      "province": "Western Cape",
      "postalCode": "8000"
    }
  }
}
```

PUT /profile

Update user profile information.

Headers:

```
Authorization: Bearer {token}
```

Request Body:

```
{
  "firstName": "John",
  "lastName": "Doe",
  "phone": "0123456789",
  "dateOfBirth": "2000-01-01",
  "gender": "Male",
  "race": "Black African"
}
```

Response: `200 OK`

PUT /profile/education

Update education information.

Headers:

```
Authorization: Bearer {token}
```

Request Body:

```json
{
  "institution": "University of Cape Town",
  "qualification": "Bachelor's Degree",
  "fieldOfStudy": "Computer Science",
  "yearOfStudy": 3,
  "graduationYear": 2026,
  "averageMarks": 75
}
```

Response: `200 OK`

PUT /profile/address

Update address information.

Headers:

```
Authorization: Bearer {token}
```

Request Body:

```json
{
  "street": "123 Main St",
  "suburb": "Gardens",
  "city": "Cape Town",
  "province": "Western Cape",
  "postalCode": "8000"
}
```

Response: `200 OK`

3. Opportunity Endpoints

GET /opportunities

Get all opportunities with pagination and filtering.

Query Parameters:

- `page` (number): Page number (default: 1)
- `limit` (number): Items per page (default: 10)
- `category` (string): Filter by category
- `field` (string): Filter by field
- `search` (string): Search in title/description

Example:

```
GET /opportunities?page=1&amp;limit=10&amp;category=bursary&amp;search=engineering
```

Response: 200 OK

```
{
  "opportunities": [
    {
      "_id": "opp_id",
      "title": "UCT Engineering Bursary 2025",
      "provider": "University of Cape Town",
      "category": "bursary",
      "field": "Engineering",
      "location": "Cape Town",
      "applicationDeadline": "2025-12-31",
      "applicationsCount": 150,
      "views": 1200,
      "isActive": true
    }
  ],
  "pagination": {
    "page": 1,
    "limit": 10,
    "total": 45,
    "pages": 5
  }
}
```

GET /opportunities/:id

Get single opportunity details.

Response: 200 OK

```
{
  "_id": "opp_id",
  "title": "UCT Engineering Bursary 2025",
  "description": "Full bursary for engineering students...",
  "provider": "University of Cape Town",
  "category": "bursary",
  "field": "Engineering",
  "location": "Cape Town",
  "applicationDeadline": "2025-12-31",
  "eligibility": {
    "minAge": 18,
    "maxAge": 25,
    "requiredEducation": "Matric",
    "minimumAverage": 70,
    "citizenship": ["South African"]
  },
  "funding": {
    "tuition": "Full",
```

```
    "accommodation": "Provided",
    "allowance": "R5000/month"
  },
  "contactInfo": {
    "email": "bursaries@uct.ac.za",
    "phone": "021-123-4567",
    "website": "https://uct.ac.za/bursaries"
  },
  "applicationsCount": 150,
  "views": 1200,
  "isActive": true
}
```

POST /opportunities

Create new opportunity (Admin only).

Headers:

```
Authorization: Bearer {admin_token}
```

Request Body:

```
{
  "title": "UCT Engineering Bursary 2025",
  "description": "Full bursary for engineering students...",
  "provider": "University of Cape Town",
  "category": "bursary",
  "field": "Engineering",
  "location": "Cape Town",
  "applicationDeadline": "2025-12-31",
  "eligibility": {...},
  "funding": {...},
  "contactInfo": {...}
}
```

Response: `201 Created`

PUT /opportunities/:id

Update opportunity (Admin only).

Headers:

```
Authorization: Bearer {admin_token}
```

Response: `200 OK`

DELETE /opportunities/:id

Delete opportunity (Admin only).

Headers:

```
Authorization: Bearer {admin_token}
```

Response: `200 OK`

4. Application Endpoints

GET /applications

Get user's applications.

Headers:

```
Authorization: Bearer {token}
```

Response: `200 OK`

```json
{
  "applications": [
    {
      "_id": "app_id",
      "opportunity": {
        "_id": "opp_id",
        "title": "UCT Engineering Bursary 2025",
        "provider": "University of Cape Town"
      },
      "status": "Pending",
      "applicationDate": "2025-10-15",
      "answers": [...],
      "documents": [...]
    }
  ]
}
```

POST /applications

Submit new application.

Headers:

```
Authorization: Bearer {token}
```

Request Body:

```
{
  "opportunityId": "opp_id",
  "answers": [
    {
      "question": "Why do you want this opportunity?",
      "answer": "I am passionate about engineering..."
    }
  ],
  "documents": [
    {
      "name": "CV",
      "fileId": "file_id",
      "downloadURL": "https://..."
    }
  ]
}
```

Response: `201 Created`

GET /applications/:id

Get single application details.

Headers:

```
Authorization: Bearer {token}
```

Response: `200 OK`

PUT /applications/:id/status

Update application status (Admin only).

Headers:

```
Authorization: Bearer {admin_token}
```

Request Body:

```
{
  "status": "Under Review"
}
```

Allowed statuses:

- Pending
- Under Review

- Shortlisted
- Accepted
- Rejected

Response: `200 OK`

5. Newsletter Endpoints

POST /newsletter/subscribe

Subscribe to newsletter.

Request Body:

```
{
  "email": "user@example.com"
}
```

Response: `200 OK`

POST /newsletter/unsubscribe

Unsubscribe from newsletter.

Request Body:

```
{
  "email": "user@example.com"
}
```

Response: `200 OK`

GET /newsletter/subscribers

Get all subscribers (Admin only).

Headers:

```
Authorization: Bearer {admin_token}
```

Response: `200 OK`

```
[
  {
    "_id": "sub_id",
    "email": "user@example.com",
```

```
    "isSubscribed": true,
    "subscribedAt": "2025-10-15"
  }
]
```

6. Upload Endpoints

POST /uploads/resume

Upload resume/CV.

Headers:

```
Authorization: Bearer {token}
Content-Type: multipart/form-data
```

Request Body (form-data):

```
file: [File]
```

Response: 200 OK

```
{
  "fileName": "resume_12345.pdf",
  "fileId": "file_id",
  "downloadURL": "https://storage.../resume_12345.pdf"
}
```

POST /uploads/document

Upload application document.

Headers:

```
Authorization: Bearer {token}
Content-Type: multipart/form-data
```

Request Body (form-data):

```
file: [File]
documentType: "ID Document"
```

Response: 200 OK

DELETE /uploads/:fileId

Delete uploaded file.

Headers:

```
Authorization: Bearer {token}
```

Response: `200 OK`

7. Admin Endpoints (NEW)

GET /admin/stats

Get comprehensive dashboard statistics.

Headers:

```
Authorization: Bearer {admin_token}
```

Response: `200 OK`

```json
{
  "totalUsers": 1250,
  "activeOpportunities": 45,
  "totalOpportunities": 60,
  "inactiveOpportunities": 15,
  "pendingApplications": 230,
  "totalApplications": 1580,
  "totalSubscribers": 890,
  "activeSubscribers": 850,
  "applicationsByStatus": {
    "pending": 230,
    "underreview": 320,
    "shortlisted": 180,
    "accepted": 450,
    "rejected": 400
  },
  "opportunitiesByCategory": {
    "bursary": 25,
    "internship": 15,
    "graduate": 12,
    "learnership": 8
  },
  "recentActivity": [
    {
      "type": "user",
      "message": "New user registered",
      "details": "John Doe (john@example.com)",
      "timestamp": "2025-10-28T10:30:00Z"
    }
```

```
    ],
    "monthlyStats": {
      "applications": [
        {"_id": {"year": 2025, "month": 10}, "count": 156}
      ],
      "users": [
        {"_id": {"year": 2025, "month": 10}, "count": 89}
      ]
    },
    "successRate": "28.5"
  }
```

GET /admin/activity

Get recent activity logs.

Headers:

```
Authorization: Bearer {admin_token}
```

Query Parameters:

- `limit` (number): Number of activities to return (default: 20)

Response: `200 OK`

```
  {
    "activity": [
      {
        "type": "user",
        "icon": "UserPlus",
        "message": "New user registered",
        "details": "John Doe",
        "email": "john@example.com",
        "timestamp": "2025-10-28T10:30:00Z"
      },
      {
        "type": "application",
        "icon": "FileText",
        "message": "Application submitted",
        "details": "UCT Engineering Bursary 2025",
        "applicant": "Jane Smith",
        "status": "Pending",
        "timestamp": "2025-10-28T09:15:00Z"
      }
    ]
  }
```

POST /admin/opportunities/bulk

Perform bulk operations on opportunities.

Headers:

```
Authorization: Bearer {admin_token}
```

Request Body:

```
{
  "opportunityIds": ["opp_id_1", "opp_id_2", "opp_id_3"],
  "action": "activate"
}
```

Allowed actions:

- `activate` - Activate selected opportunities
- `deactivate` - Deactivate selected opportunities
- `delete` - Delete selected opportunities (also deletes associated applications)

Response: `200 OK`

```
{
  "message": "Bulk activate completed successfully",
  "modifiedCount": 3
}
```

GET /admin/export/:type

Export data as CSV file.

Headers:

```
Authorization: Bearer {admin_token}
```

Parameters:

- `type` (string): Type of data to export
  - `users` - Export all users
  - `applications` - Export all applications
  - `opportunities` - Export all opportunities
  - `newsletter` - Export newsletter subscribers

Example:

```
GET /admin/export/users
```

Response: `200 OK`

```
Content-Type: text/csv
Content-Disposition: attachment; filename="users_export_1730145600000.csv"

ID,First Name,Last Name,Email,Phone,Date of Birth,Gender,Race,Created At
"user_id_1","John","Doe","john@example.com","0123456789","2000-01-01","Male","Black Afric
```

CSV Format by Type:

Users CSV:

- ID, First Name, Last Name, Email, Phone, Date of Birth, Gender, Race, Created At

Applications CSV:

- ID, Applicant Name, Applicant Email, Opportunity, Provider, Category, Status, Application Date

Opportunities CSV:

- ID, Title, Provider, Category, Field, Location, Deadline, Applications, Views, Active, Created At

Newsletter CSV:

- Email, Subscribed, Subscribed At

GET /admin/analytics

Get analytics data with trends.

Headers:

```
Authorization: Bearer {admin_token}
```

Query Parameters:

- `period` (string): Time period for analytics (default: 30d)
  - `7d` - Last 7 days
  - `30d` - Last 30 days
  - `90d` - Last 90 days
  - `1y` - Last year

Example:

```
GET /admin/analytics?period=30d
```

Response: `200 OK`

```json
{
  "userGrowth": [
    {
      "_id": "2025-10-01",
      "count": 12
    },
    {
      "_id": "2025-10-02",
      "count": 15
    }
  ],
  "applicationTrends": [
    {
      "_id": "2025-10-01",
      "count": 45
    }
  ],
  "topOpportunities": [
    {
      "_id": "opp_id",
      "title": "UCT Engineering Bursary 2025",
      "provider": "University of Cape Town",
      "applicationsCount": 150,
      "views": 1200,
      "category": "bursary"
    }
  ],
  "statusDistribution": [
    {
      "_id": "Pending",
      "count": 230
    },
    {
      "_id": "Accepted",
      "count": 450
    }
  ],
  "categoryStats": [
    {
      "_id": "bursary",
      "count": 25,
      "totalApplications": 890,
      "avgViews": 1150.5
    }
  ]
}
```

8. Error Codes

400 Bad Request

Invalid request data or parameters.

```
{
  "message": "Please provide opportunity IDs"
}
```

401 Unauthorized

Missing or invalid authentication token.

```
{
  "message": "Not authorized, no token"
}
```

403 Forbidden

User doesn't have required permissions.

```
{
  "message": "Not authorized as admin"
}
```

404 Not Found

Resource not found.

```
{
  "message": "Opportunity not found"
}
```

500 Server Error

Internal server error.

```
{
  "message": "Server error"
}
```

9. Authentication & Authorization

JWT Token

All authenticated endpoints require a Bearer token in the Authorization header.

Header Format:

```
Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...
```

User Roles

Regular User

- Can view opportunities
- Can submit applications
- Can manage own profile
- Can subscribe to newsletter

Admin

- All user permissions
- Can create/edit/delete opportunities
- Can view all applications
- Can update application status
- Can perform bulk operations
- Can export data
- Can view analytics and statistics

Token Expiration

JWT tokens expire after 7 days. Users must login again after expiration.

10. Rate Limiting

- **Public endpoints:** 100 requests per 15 minutes
- **Authenticated endpoints:** 500 requests per 15 minutes
- **Admin endpoints:** 1000 requests per 15 minutes

11. Pagination

List endpoints support pagination using query parameters:

```
?page=1&amp;limit=10
```

Response includes pagination info:

```
{
  "data": [...],
  "pagination": {
    "page": 1,
    "limit": 10,
    "total": 100,
    "pages": 10
  }
}
```

Summary

Total Endpoints: 35

- **Authentication:** 3 endpoints
- **Profile:** 4 endpoints
- **Opportunities:** 5 endpoints
- **Applications:** 4 endpoints
- **Newsletter:** 3 endpoints
- **Uploads:** 3 endpoints
- **Admin:** 6 endpoints (NEW)
- **Users:** 7 endpoints

For questions or support, contact: thapelo@studentopportunities.co.za

API Base URL: https://your-backend.onrender.com/api