Grad Atlas

IMT 542
Team8
Christine Chen, Yue Liu

Information Story - User & Purpose

"New and current graduate students often find it hard to discover local events or communities outside of academic settings. They rely on word-of-mouth or scattered event platforms, missing out on enriching social experiences."

Our User: University of Washington Graduate Students

- Students seeking social, academic, and professional engagement opportunities
- Those looking for events aligned with their specific interests and location preferences
- Graduate students wanting to discover community events outside academic settings

Information Goal

- Centralize event discovery from multiple sources (Everout, Meetup, UW websites)
- Filter events by tags, location, name, and description
- Standardize event information for easy comparison
- Export selected events to CSV or JSON for offline analysis

Information Story - Requirements & Scope

Project Scope

- Search by tag, location, event name, and details via web interface
- Consistent JSON format with standardized fields for all events: name, host, details, location, attendees, tags.
- Export selected events to CSV and JSON formats
- Protected admin panel for adding/editing events
- Multiple access methods: web interface and REST API
- Flexible database support: SQLite for development, PostgreSQL for production
- Data validation through Flask-SQLAlchemy models

Out of Scope

- User registration
- Personalized recommendations
- Event RSVP
- Calendar integration
- Real-time updates

Existing Information Analysis - Structure & Access

Source Platform	Structure	Access	Quality Issues	Performance
Everout	HTML-based event listings with inconsistent formatting	Web scraping required, no public API	Inconsistent date formats, mixed location specificity	Slow page loads, heavy graphics
Meetup	JSON via API, well-structured but generic	REST API available with rate limiting	Broad audience focus, not graduate-student specific	Good API response times (~200ms)
UW Websites	Scattered across department pages, inconsistent HTML	Manual collection required, no centralized feed	Often hidden in deep navigation, inconsistent formatting	Varies by department site

Existing Information Analysis - Transformation Requirements

Time Normalization

From: "Friday evening", "5:30 PM PDT", "Next week"

To: ISO 8601 format "2025-05-16T17:30:00-07:00"

Categorization Enhancement

From: Generic tags like "social", "networking"

To: Graduate-specific tags: "academic", "professional-development", "thesis-writing"

Access Method Unification

- Replace 3+ different access methods with unified REST API
- All events return same JSON schema regardless of source

New Features Required

- UUID generation for unique event identification across sources
- Mobile-responsive interface for on-the-go access
- Scalable data storage using SQLAlchemy models

New Portable Information Structure

Information Content

- **Added:** Graduate-relevant tagging ("Text mining", "Python", "Research", "workshop", "data")
- **Added:** Attendee count for group size planning (40 attendees for "Starting the Conversation")
- **Enhanced:** Host attribution with clear organizer identification (UW Libraries, Seattle Interactive M., etc.)
- **Standardized:** Event descriptions with consistent detail level and formatting

Structure Transformation

```
BEFORE:
<p><strong>Date:</strong> Friday, May 16, 2025</p>
<p><strong>Location:</strong> Rhein Haus, 912 12th Ave, Seattle, WA</p>

AFTER:
{
  "name": "Starting the Conversation",
  "host": "Andrey",
  "details": "Let's practice starting low stakes conversations in low pressure environments...",
  "location": "Ada's Technical Books, 425 15th Ave E, Capitol Hill, Seattle, WA",
  "tags": ["Communication Skills", "Social", "Confidence and Self-Esteem"],
  "attendees": 40
}
```

New Portable Information Structure

Format

Before: Various data formats and APIs from different platforms

After: Unified JSON format and served via Flask API

Export Options: CSV for spreadsheet analysis, JSON for developer integration

Access Methodology

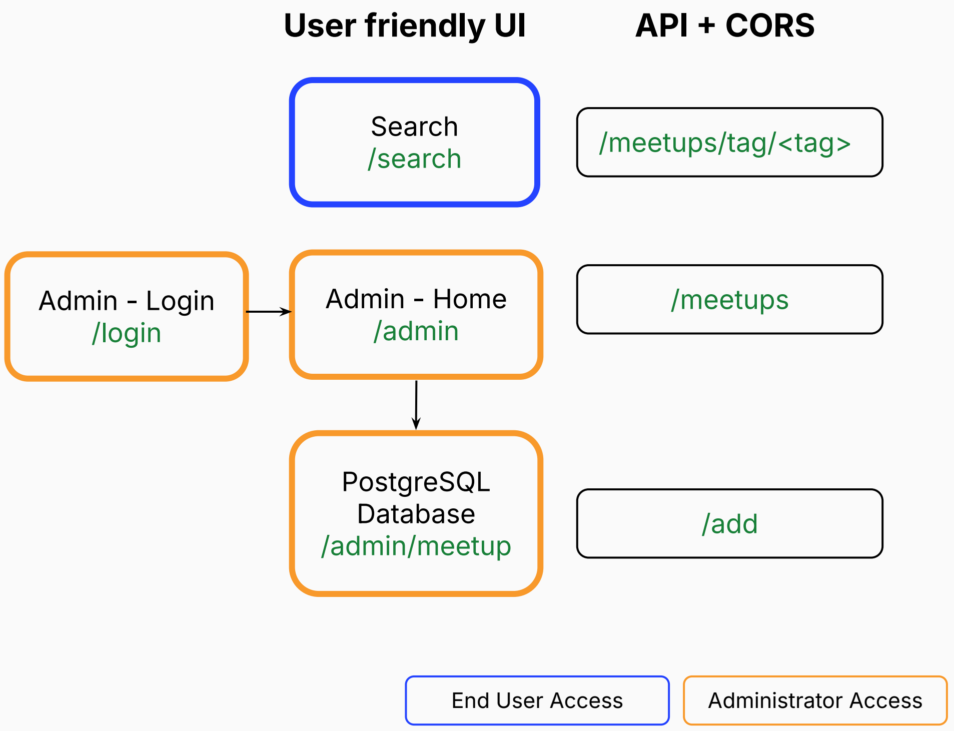
```
@app.route('/meetups/search')  # Multi-field search functionality
@app.route('/meetups/tag/<tag>')  # Tag-based filtering
@app.route('/meetups/export-selected', methods=['POST'])  # Export selected events
```

Same data structure accessible via web UI, REST API, and multiple export formats.

New Portable Information Structure

Web-browser, publicly hosted

- **Framework**: Flask (Python), RESTful API structure
- **Database**: PostgreSQL with SQLAlchemy ORM (hosted on Render)
- **Authentication**: Flask-Login for admin access
- **Admin UI**: Flask-Admin with secure model views
- **Frontend**: HTML/CSS single-page interface with real-time search + CSV export
- **Deployment**: Hosted on Render using Procfile + requirements.txt

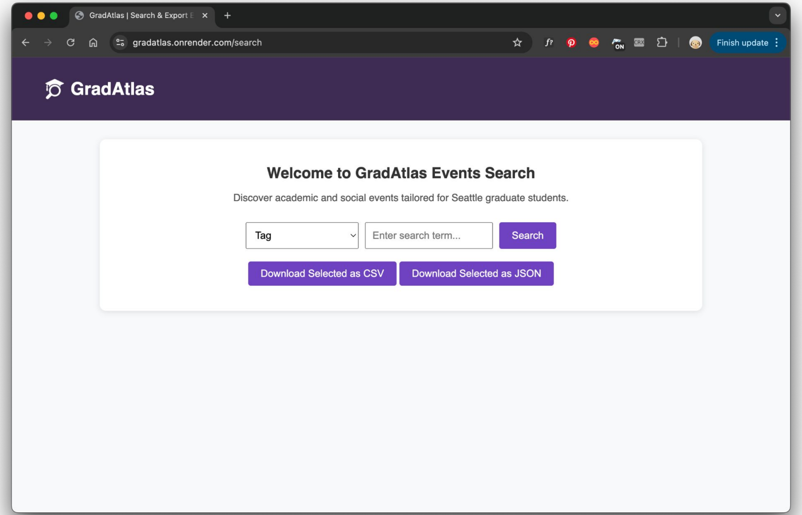


New Portable Information Structure

Search Function via Field & CSV/JSON Exportable

👉 Scan QR code to it yourself!

Search via ‘Tag/Location/Event/Details’


GradAtlas | Search & Export
gradatlas.onrender.com/search
Finish update
GradAtlas
Tag
Enter search term...
Search
Download Selected as CSV
Download Selected as JSON

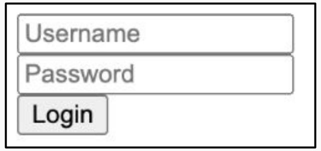
Welcome to GradAtlas Events Search

Discover academic and social events tailored for Seattle graduate students.

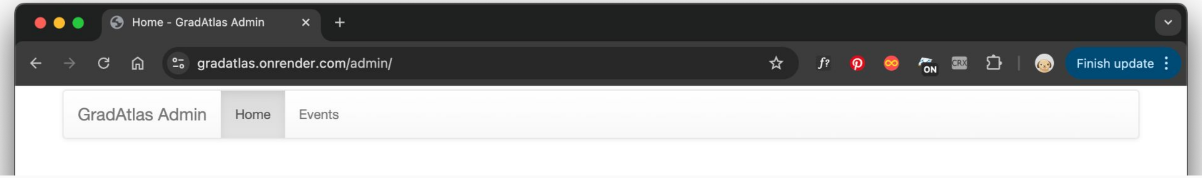
New Portable Information Structure

Login protected & Add/edit & Stored in PostgreSQL Database

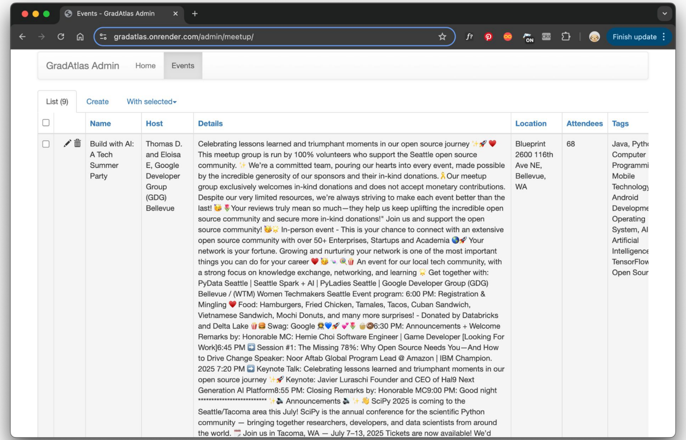
Admin - Login



Admin - Home

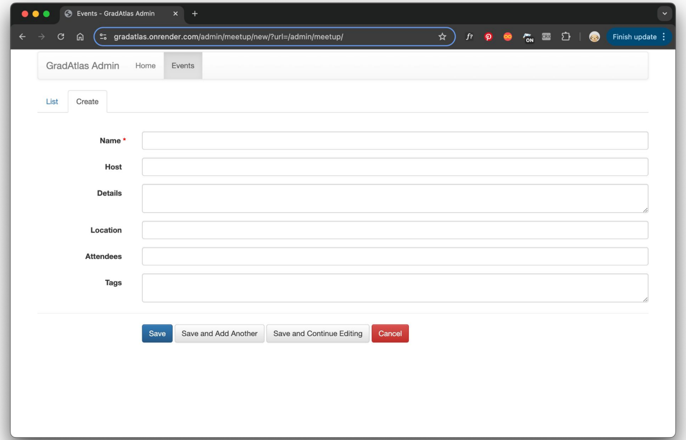


Event List - Edit & Delete



		Name	Host	Details	Location	Attendees	Tags
☐							
☐	✎ 🗑	Build with AI: A Tech Summer Party	Thomas D. and Eloisa E, Google Developer Group (GDG) Bellevue	Celebrating lessons learned and triumphant moments in our open source journey ✨🚀❤️ This meetup group is run by 100% volunteers who support the Seattle open source community. ✨ We're a committed team, pouring our hearts into every event, made possible by the incredible generosity of our sponsors and their in-kind donations.🎗️Our meetup group exclusively welcomes in-kind donations and does not accept monetary contributions. Despite our very limited resources, we're always striving to make each event better than the last! 🥳 🌷Your reviews truly mean so much—they help us keep uplifting the incredible open source community and secure more in-kind donations!" Join us and support the open source community! 🥳🌟 In-person event - This is your chance to connect with an extensive open source community with over 50+ Enterprises, Startups and Academia 🌏🚀 Your network is your fortune. Growing and nurturing your network is one of the most important things you can do for your career ❤️ 🥳 🍬 🍭🍿 An event for our local tech community, with a strong focus on knowledge exchange, networking, and learning 🌟 Get together with: PyData Seattle | Seattle Spark + AI | PyLadies Seattle | Google Developer Group (GDG) Bellevue / (WTM) Women Techmakers Seattle Event program: 6:00 PM: Registration & Mingling ❤️ Food: Hamburgers, Fried Chicken, Tamales, Tacos, Cuban Sandwich, Vietnamese Sandwich, Mochi Donuts, and many more surprises! - Donated by Databricks and Delta Lake 🍿🍔 Swag: Google 🧑‍🚀💙🚀 💕🌷 🧁🍩6:30 PM: Announcements + Welcome Remarks by: Honorable MC: Hemie Choi Software Engineer | Game Developer [Looking For Work]6:45 PM ➡️ Session #1: The Missing 78%: Why Open Source Needs You—And How to Drive Change Speaker: Noor Aftab Global Program Lead @ Amazon | IBM Champion. 2025 7:20 PM ➡️ Keynote Talk: Celebrating lessons learned and triumphant moments in our open source journey ✨🚀 Keynote: Javier Luraschi Founder and CEO of Hal9 Next Generation AI Platform8:55 PM: Closing Remarks by: Honorable MC9:00 PM: Good night ************************** ✨🔈 Announcements 🔈 ✨ 👋 SciPy 2025 is coming to the Seattle/Tacoma area this July! SciPy is the annual conference for the scientific Python community — bringing together researchers, developers, and data scientists from around the world. 📆 Join us in Tacoma, WA — July 7–13, 2025 Tickets are now available! We'd	Blueprint 2600 116th Ave NE, Bellevue, WA	68	Java, Pyth Computer Programmi Mobile Technolog Android Developme Operating System, AI Artificial Intelligence TensorFlow Open Sour

Add New Events



Name *	
Host	
Details	
Location	
Attendees	
Tags	

FAIR Assessment of New Structure

FAIR Principle	Score	Assessment Details
Findable	★★★★☆	Standardized taxonomic structure, rich metadata, graduate student-specific categorization
Accessible	★★★★☆	Web interface with filtering, responsive design, multiple access methods
Interoperable	★★★☆☆	Standard data structures for cross-platform compatibility, CSV & JSON export
Reusable	★★★☆☆	Source tracking (UW LIbrary, Meetup), accurate descriptions, CSV & JSON export capabilities

Quality, Reliability & Performance

Quality Controls

- JSON schema validation at input level (e.g., tag format, attendee count)
- Feedback loop: community-flagged events → admin validators (email)
- Weekly QA audit of filters, search, export features

Performance Metrics

- Target API response: < 500ms; Page load: < 2s
- Monitoring tools: Render's DevTools

Security

- Admin panel login protection (/login for admin only)
- HTTPS, token-restricted endpoints for backend security

Next Steps & Implementation

First Phase

- **Create User Login & RSVP Function:** Allow users to register/login and RSVP to events
- **Add Contact Admin Function:** Provide a simple form or email trigger so users can report issues or request event additions.
- **Add Subscription Option:** Allow users to subscribe to event updates by tag or location (via email or RSS).
- **Custom Domain & HTTPS:** Custom domain on Render and enforce HTTPS for production readiness.

Second Phase

- **Expand Testing with Benchmarks:**
  - Write unit/integration tests using pytest
  - Use Postman benchmark response times and validate API performance.

Third Phase

- **Build Automated Event Crawler:** Create a scheduled script or background task to fetch and update event listings from Meetup and UW sites.

Thank you!

Questions?