

MAPTAC

Monitoring and Processing Tool for Alcohol Concentration

A website that makes BACtrack Skyn alcohol sensor data useable and interpretable, enabling research staff to track adherence and detect recent drinking events.

[Click here for a preview of the site.](#)

MAPTAC processes transdermal alcohol concentration (TAC) signals:

- Detects and corrects for signal disruptions such as device removals, environmental alcohol exposures, and defective sensors.
- Classifies drinking vs. non-drinking days using a validated algorithm.
- Processes data on a remote server, avoiding local computing demands.

MAPTAC provides an intuitive user-interface:

- Track recent study data using the daily tracking page, which includes adjustable thresholds for classifying drinking and assessing data quality.
- Download day- and curve- level spreadsheets, enabling efficient analysis of adherence outcomes and TAC features.
- Visualize data across days, curves, and custom timelines.

MAPTAC includes robust security & authentication:

- Users are authenticated via a Duo confirmation login system
- Uploads are restricted to de-identified alcohol biosensor data
- Security measures include IAM (least-privilege roles and MFA), CloudTrail and GuardDuty for audit/threat detection, CloudFront with ACM for TLS edge protection and private S3 origins (OAC), DynamoDB for auth sessions, SSM Parameter Store for secrets, VPC endpoints and security groups for Batch network isolation, and S3 SSE encryption for data at rest.

Consulting Package - \$3500

Services include:

- Deployment of the MAPTAC website, with testing and confirmation of end-to-end website functionality.
- Tailoring the website to meet the research team's needs. Research teams may request minor modifications (e.g., adding a new TAC feature or daily tracking column). Large modifications (e.g., building a new prediction algorithm) may require significant programming labor; associated cost increases will be discussed prior to implementation.
- Configuration of the research team's user and login credentials.
- Coordination with IT to ensure data security requirements.
- Troubleshooting processing errors and website bugs within 24 hours.
- Testing and training with designated lab members.
- Access to documentation for using and maintaining the website.

Preferred Payment Timeline: \$1750 deposit, \$1750 after login setup and staff training.

These costs guarantee all the above services for one year. After year one, a yearly retainer fee of \$1000 is required to keep your account active, cover server charges, and retain troubleshooting services. Accounts can be re-activated after down-time. Timing of retainer fee payment timelines are flexible based on budget and study needs.

Estimated time to deploy website: 2 months after receiving deposit.

To inquire further: email ndidier@streamlined-insight.com

Current Deployment Sites:

- University of Rhode Island (PI: Nicole Weiss)
- Brown University (PIs: Rachel Gunn, Lauren Micalizzi)