Contents

[7.2] Chronic Stress Burnout

1. Operational Definition: A state of emotional, physical, and mental exhaustion caused by prolonged and excessive stress, leading to reduced efficacy, cynicism, and a significant drop in security task performance and vigilance.

2. Main Metric & Algorithm:

- **Metric: Chronic Stress Score (CSS)**. Formula: `CSS = (PTO_USE * 0.4) + (TICKET_OVERTIME * 0.3) + (SENTIMENT_SCORE * 0.3)`.

- **Pseudocode:**

  python

  ```
  def calculate_css(employee_id, start_date, end_date):
      # Data Collection
      pto_use = query_hr_system(employee_id, start_date, end_date).sick_days_used
      ticket_overtime = query_ticketing_system(employee_id, start_date, end_date).avg_ticket

      # Perform sentiment analysis on team channel messages by the employee
      employee_messages = query_slack_api(employee_id, start_date, end_date)
      sentiment_score = analyze_sentiment(employee_messages)  # Returns a score from -1 (neg

      # Normalize inputs to a 0-10 scale for weighting
      norm_pto = min(10, pto_use / 2)  # e.g., 20 days = score of 10
      norm_overtime = min(10, ticket_overtime / 5)  # e.g., 50 after-hours tickets = score c
      norm_sentiment = (1 - sentiment_score) * 5  # Map -1 to 10, 1 to 0

      # Calculate weighted CSS
      css = (norm_pto * 0.4) + (norm_overtime * 0.3) + (norm_sentiment * 0.3)
      return css
  ```

- **Alert Threshold:** `CSS > 6.5` for two consecutive weeks.

3. Digital Data Sources (Algorithm Input):

- **HR System API (e.g., Workday):** `employee_id`, `sick_days_used`.
- **Ticketing System API (e.g., Jira):** `assignee`, `created_time`, `resolution_time`. Filter for tickets closed outside of standard working hours.
- **Communication Platform API (e.g., Slack):** `user`, `message`, `timestamp`. Access requires strict ethical oversight and anonymization.

4. Human-to-Human Audit Protocol: Conduct confidential, anonymous pulse surveys using standardized tools like the Maslach Burnout Inventory (MBI) or a simplified 5-question Likert scale survey: "I feel emotionally drained from my work," "I feel burned out from my work," "I feel tired when I get up in the morning and have to face another day at work," "I feel I'm working too hard on my job," "I feel frustrated by my job."

5. Recommended Mitigation Actions:

- **Technical/Digital Mitigation:** Implement a dashboard for managers to monitor team CSS aggregates (never individuals) and trigger alerts.
- **Human/Organizational Mitigation:** Enforce mandatory use of vacation time. Provide access to confidential counseling services (EAP). Redistribute workload.
- **Process Mitigation:** Introduce "focus time" blocks with no alert assignments. Review and adjust shift rotation schedules to be less disruptive.